

Webster Lake Aquatic Vegetation Management Plan Update February 20, 2006

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Table of Contents

Introduction	1
2005 Sampling	
Webster Lake Sampling Results	
April Tier II Survey	
May Tier II Survey	
August Tier II Survey	
Backwater Lake Sampling Results	
April Tier II Survey	
May Tier II Survey	
August Tier II Survey	
Plant Sampling Discussion	
Webster Lake Sampling Discussion	
Backwater Lake Sampling Discussion	
2005 Vegetation Control	31
Action Plan and Budget Update	
Public Involvement	
Plant Sampling Data	
Permit Application	



List of Figures

15, 2005
Figure 2. Webster Lake, curlyleaf pondweed distribution and abundance,
April 15, 2005
Figure 3. Webster Lake, Eurasian watermilfoil distribution and abundance
1 pm 15, 2005
Figure 4. Webster Lake, coontail distribution and abundance, April 15, 20054
Figure 5. Webster Lake, Chara distribution and abundance, April 15, 20055
Figure 6. Webster Lake, slender naiad distribution and abundance, April 15, 2005
Figure 7. Webster Lake, overall aquatic vegetation distribution and abundance
May 25, 2005
Figure 8. Webster Lake, curlyleaf pondweed distribution and abundance, May
25, 2005
Figure 9. Webster Lake, coontail distribution and abundance, May 25, 20058
Figure 10. Webster Lake, Eurasian watermilfoil distribution and abundance,
May 25, 20059
Figure 11. Webster Lake, Chara distribution and abundance, May 25, 20059
Figure 12. Webster Lake, slender naiad distribution and abundance, May 25, 200510
Figure 13. Webster Lake, aquatic vegetation distribution and abundance, August
2, 2005
Figure 14. Webster Lake, coontail distribution and abundance, August 2,
200513
Figure 15. Webster Lake, slender naiad distribution and abundance, August 2,
2005
Figure 16. Webster Lake, curlyleaf pondweed distribution and abundance, Augus
2, 2005
Figure 17. Webster Lake, Chara distribution and abundance, August 2, 200514
Figure 18. Webster Lake, Eurasian watermilfoil distribution and abundance, August 2, 2005
Figure 19. Backwater Lake, overall aquatic vegetation distribution and
Abundance, April 15, 2005
Figure 20. Backwater Lake, coontail distribution and abundance, April 15,
200517
Figure 21. Backwater Lake, Eurasian watermilfoil distribution and abundance
April 15, 200518
Figure 22. Backwater Lake, curlyleaf pondweed distribution and abundance,
April 15, 200518
Figure 23. Backwater Lake, aquatic vegetation distribution and abundance,
May 25, 200519
Figure 24. Backwater Lake, coontail distribution and abundance, May 25,
2005



Figure 25.	Mary 25, 2005
E: 06	May 25, 2005
	Backwater Lake, Eurasian watermilfoil distribution and abundance May 25, 200521
Figure 27.	Backwater Lake, aquatic vegetation distribution and abundance, August 2, 200523
Figure 28.	Backwater Lake, coontail distribution and abundance, August 2,
E: 20	2005
	Backwater Lake, Eurasian watermilfoil distribution and abundance August 2, 200524
Figure 30.	Backwater Lake, curlyleaf pondweed distribution and abundance, August 2, 200525
Figure 31	Webster Lake, comparison of the percentage of sample sites with
1 18410 31.	Plants in the last five surveys
Figure 32.	Webster Lake, comparison of number of native species collected in
Eigura 22	the last five surveys
rigule 33.	Webster Lake, comparison of native species richness in the last five surveys
Figure 34.	Webster Lake, comparison of mean rake density in the last five
	surveys
Figure 35.	Webster Lake, Eurasian watermilfoil percent occurrence in the last
C	four surveys27
Figure 36.	Webster Lake, Eurasian watermilfoil relative density in the last four
	surveys
•	Eurasian watermilfoil percent occurrence in the last seven surveys28
Figure 38.	Webster Lake, curlyleaf pondweed percent occurrence in the last four surveys
Figure 39.	Webster Lake, curlyleaf pondweed relative density in the last four
	surveys
Figure 40.	Backwater Lake, percentage of littoral sites with plants in the last four surveys
Figure 41	Backwater Lake, number of native species collected in the last four
riguie 41.	surveys
Figure 42.	Backwater Lake, native species richness in the last four surveys30
_	Backwater Lake, mean rake density in the last four surveys30
Figure 44.	Backwater Lake, Eurasian watermilfoil percent occurrence in the last
_	four surveys30
Figure 45.	Backwater Lake, Eurasian watermilfoil relative density in the last
	four surveys31
Figure 46.	Webster Lake, Eurasian watermilfoil treatment areas, April 26,
	200531
Figure 47.	Webster and Backwater Lake, Eurasian watermilfoil treatment areas
F' 40	June 1, 2005
_	Webster Lake, shoreline treatment areas, June 1, 2005
Figure 49.	Backwater Lake, shoreline treatment areas, June 1, 200533



Figure 50.	Webster Lake, shoreline algae treatment areas, June 28, 2005	.34
Figure 51.	Webster Lake, naiad treatment areas, July 21, 2005	.35
Figure 52.	Webster Lake, algae treatment areas, August 11, 2005	.35
Figure 53.	Backwater Lake, Eurasian watermilfoil treatment areas, August 23,	
	2005	.36
Figure 54.	Webster Lake, potential Eurasian watermilfoil treatment areas	.37
Figure 55.	Backwater Lake, potential Eurasian watermilfoil treatment areas	.38
Figure 56.	Webster Lake, potential curlyleaf pondweed treatment areas	.39
_	· 1	



List of Tables

Table 1. Occurrence and abundance of submersed aquatic plants in Webster La	ıke,
April 15, 2005	2
Table 2. Occurrence and abundance of submersed aquatic plants in Webster La	ıke,
May 25, 2005	6
Table 3. Occurrence and abundance of submersed aquatic plants in Webster La	ıke,
August 2, 2005	11
Table 4. Occurrence and abundance of submersed aquatic plants in Backwater	
Lake, April 15, 2005	16
Table 5. Occurrence and abundance of submersed aquatic plants in Backwater	
Lake, May 25, 2005	19
Table 6. Occurrence and abundance of submersed aquatic plants in Backwater	
Lake, August 2, 2005	22
Table 7. Webster Lake, 2005 herbicide application summary	36
Table 8. Webster Lake, budget estimates for the next three seasons	40



INTRODUCTION

This report was created in order to update the Webster Lake Aquatic Vegetation Management Plan. The plan update was funded by the Indiana Department of Natural Resources Lake and River Enhancement Program (LARE) and the Webster Lake Conservation Association. The update serves as a tool to track changes in the vegetation community, to adjust the action plan as needed, and to maintain eligibility for additional LARE funds. Items covered include the 2005 sampling results, a review of the 2005 vegetation controls, and updates to the budget and action plans. Once reviewed and approved, the update should be included in the original vegetation management plan, following the reference section and prior to the appendix.

2005 PLANT SAMPLING

Three tier II surveys were completed on Webster and Backwater Lake in order to document the changes in the plant community and determine success or failure of control techniques. Surveys were completed for both lakes on April 15, May 25, and August 2, 2005.

Webster Lake Sampling Results

April Tier II survey, Webster Lake

On April 15, 2005 a Tier II survey was completed on Webster Lake. A Secchi disk reading was taken prior to sampling and was found to be at 7.0 feet. Plants were present to a maximum depth of 10 feet. One hundred and sixty sites were randomly selected within the littoral zone. Results of the sampling are listed in Table 1 and overall aquatic vegetation distribution and density is illustrated in Figure 1 (in species location and density figures, plant location is illustrated by a color coded dot, the color of the dot represents the density of the species and sample sites without that species are illustrated by a smaller white diamond). The bottom half of Table 1 illustrates the frequency of occurrence, relative density, mean density, and dominance index of individual species collected from Webster Lake in April 2005.



Table 1. Occurrence and abundance of submersed aquatic plants in Webster Lake April 15, 2005.

April 13, 200	13.					,	
Date:	4/15/2005		Littoral sites with plants:	121		Species diversity:	0.73
Littoral depth (ft):	10		Number of species:	7		Native diversity:	0.63
Littoral sites:	158		Maximum species/site:	4		Rake diversity:	0.72
Total sites:	160		Mean number species/site:	1.28		Native rake diversity:	0.63
Secchi:	7		Mean native species/site:	0.4		Mean rake score:	2.29
Common Name		Site frequency	Relative density		Mean density	Dominance	
Curlyleaf pondwee	ed	47.50	0.66		1.38	13.10	
Eurasian watermilf	foil	40.60	0.83		2.05	16.60	
Coontail		20.60	0.33		1.58	6.50	
Chara sp.		10.60	0.17		1.59	3.40	
Slender naiad		7.50	0.12		1.58	2.40	
Elodea		0.60	0.01		2.00	0.30	
Flatstem pondwee	d	0.60	0.01		1.00	0.10	

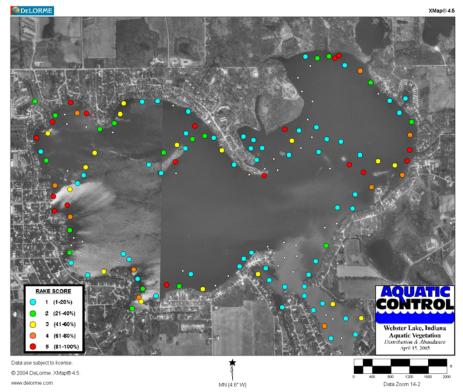


Figure 1. Webster Lake, aquatic vegetation distribution and abundance, April 15, 2005.



A total of 7 species were collected of which two species were exotic, curlyleaf pondweed and Eurasian watermilfoil. Curlyleaf pondweed was present at the highest percentage of sample sites (47%) but ranked second in relative density. Location and density for curlyleaf pondweed is illustrated in Figure 2. Eurasian watermilfoil ranked second in site frequency (40%) but ranked first in relative density (Figure 3). Coontail ranked third in site frequency (20%) and relative density (Figure 4). Chara ranked fourth in site frequency (10%) and relative density followed by slender naiad which ranked fifth in site frequency (7%) and relative density (Figure 5 & 6). Elodea and flatstem pondweed were also present at a lower percentage of sites.

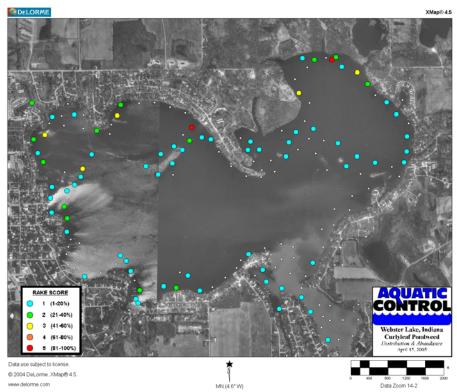


Figure 2. Webster Lake, curlyleaf pondweed distribution and abundance, April 15, 2005.



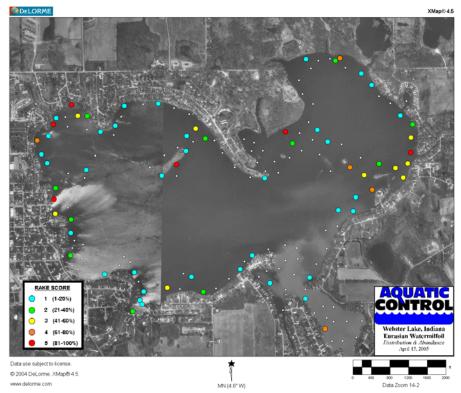


Figure 3. Webster Lake, Eurasian watermilfoil distribution and abundance, April 15, 2005.

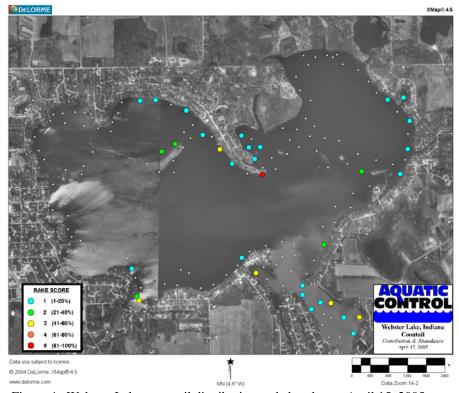


Figure 4. Webster Lake, coontail distribution and abundance, April 15, 2005.



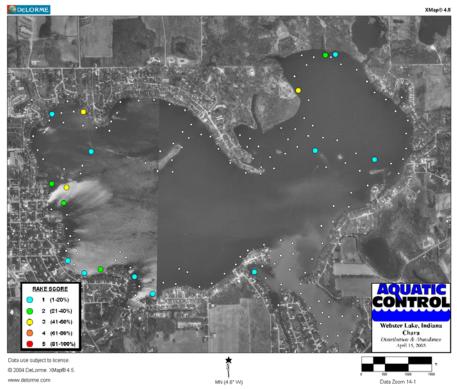


Figure 5. Webster Lake, chara distribution and abundance, April 15, 2005.

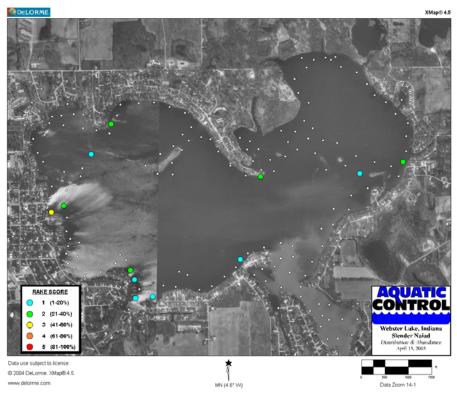


Figure 6. Webster Lake, slender naiad distribution and abundance, April 15, 2005.



May Tier II survey, Webster Lake

The second round of Tier II sampling took place on May 25, 2005. A Secchi disk reading was taken prior to sampling and was found to be 7.0 feet. Plants were present to a maximum of 13 feet. The same one hundred and sixty sites were sampled in May as were in April. Results of the sampling are listed in Table 2. Overall aquatic vegetation distribution and density is illustrated in Figure 7.

Table 2. Occurrence and abundance of submersed aquatic plants in Webster Lake, May 25, 2005.

May 25, 2005.							
Date: 5/2	5/2005		Littoral sites with plants:	147		Species diversity:	0.79
Littoral depth (ft):	13		Number of species:	13		Native diversity:	0.74
Littoral sites:	159		Maximum species/site:	5		Rake diversity:	0.72
Total sites:	160		Mean number species/site:	1.93		Native rake diversity:	0.73
Secchi:	12		Mean native species/site:	0.90		Mean rake score:	3.42
Common Name		Site frequency	Relative density		Mean density	Dominance	
Curlyleaf pondweed		65.60	2.01		3.06	40.10	
Coontail		41.90	0.78		1.85	15.50	
Eurasian watermilfoil		36.90	0.57		1.54	11.40	
Chara sp.		10.60	0.33		3.06	6.50	
Flatstem pondweed		10.00	0.10		1.00	2.00	
Slender naiad		8.80	0.21		2.43	4.30	
Horned pondweed		4.40	0.05		1.14	1.00	
Northern watermilfoil		4.40	0.07		1.57	1.40	
Elodea		4.40	0.08		1.71	1.50	
Largeleaf pondweed		2.50	0.04		1.50	0.80	
Sago pondweed		1.90	0.02		1.00	0.40	
Eel grass		0.60	0.01		1.00	0.10	
Water stargrass		0.60	0.02		3.00	0.40	



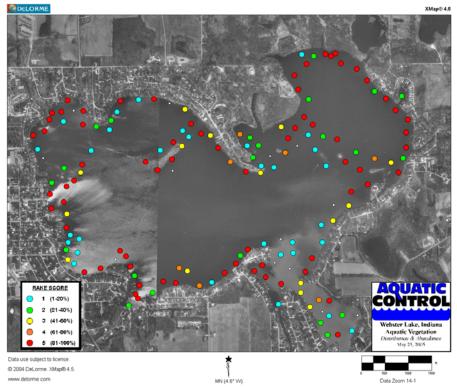


Figure 7. Webster Lake, overall aquatic vegetation distribution and density, May 25, 2005.

A total of 13 species were collected of which 11 of the species were native. Eurasian watermilfoil and curlyleaf pondweed were the only exotic species collected. Curlyleaf pondweed was present at the highest percentage of sample sites (65%) and also had the highest relative density (Figure 8). Coontail ranked second in site frequency (41%), and relative density (Figure 9), followed by Eurasian watermilfoil (Figure 10). Chara ranked fourth in site frequency (10%) and relative density (Figure 11). Flatstem pondweed ranked fifth in overall site frequency (10%) but ranked sixth in relative density. Slender naiad ranked sixth in overall site frequency (8%) but ranked fifth in relative density (Figure 12). Horned pondweed, northern watermilfoil, elodea, largeleaf pondweed, sago pondweed, eel grass, and water stargrass were all present but at a lower frequency and density.



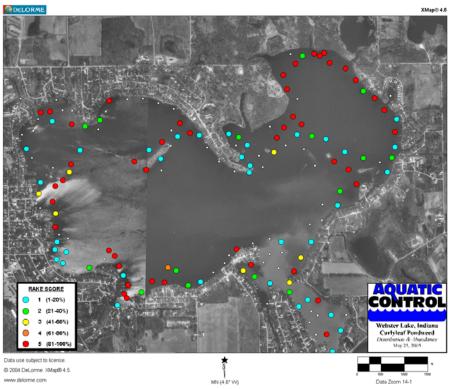


Figure 8. Webster Lake, curlyleaf pondweed distribution and abundance, May 25, 2005.

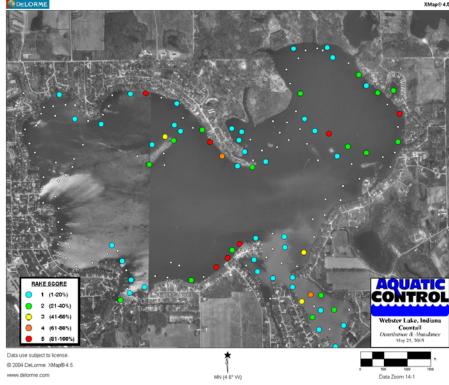


Figure 9. Webster Lake, coontail distribution and abundance, May 25, 2005.



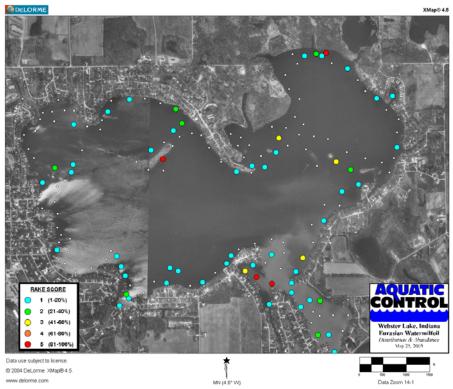


Figure 10. Webster Lake, Eurasian watermilfoil distribution and abundance, May 25, 2005.

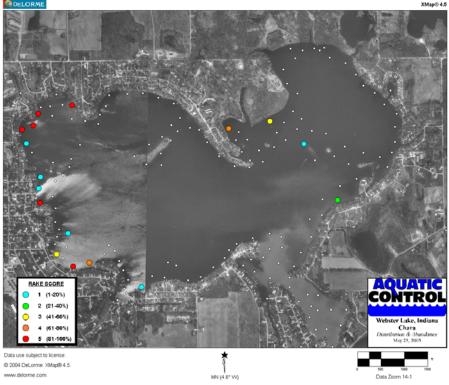


Figure 11. Webster Lake, chara distribution and abundance, May 25, 2005.



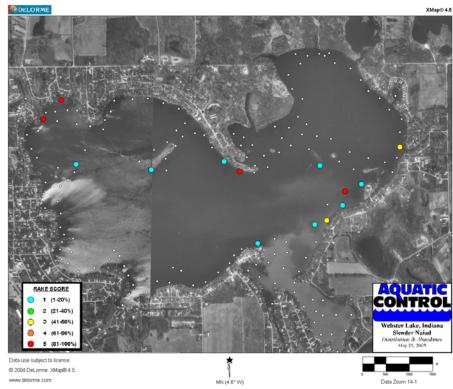


Figure 12. Webster Lake, slender naiad distribution and abundance, May 25, 2005.

August Tier II survey, Webster Lake

The third round of Tier II sampling took place on August 2, 2005. A Secchi disk reading was taken prior to sampling and was found to be 8.0 feet. Plants were present to a maximum of 14 feet. The same one hundred and sixty sites were sampled in August as were in April and May. Results of the sampling are listed in Table 3. Overall aquatic vegetation distribution and density is illustrated in Figure 13.



Table 3. Occurrence and abundance of submersed aquatic plants in Webster Lake,

August 2, 2005.

August 2, 20	<u> </u>						
Date:	8/2/2005		Littoral sites with plants:	146		Species diversity:	0.80
Littoral depth (ft):	14		Number of species:	15		Native diversity:	0.74
Littoral sites:	160		Maximum species/site:	5		Rake diversity:	0.74
Total sites:	160		Mean number species/site:	1.74	Į.	Native rake diversity:	0.70
Secchi:	8		Mean native species/site:	1.48		Mean rake score:	3.05
Common Name		Site frequency	Relative density		Mean density	Dominance	
Coontail		66.30	1.69		2.55	33.80	
Slender naiad		28.80	0.82		2.85	16.40	
Curlyleaf pondwe	ed	20.00	0.27		1.34	5.40	
Chara sp.		13.80	0.33		2.41	6.60	
Flatstem pondwe	ed	9.40	0.20		2.13	4.00	
Water stargrass		8.80	0.14		1.57	2.80	
Sago pondweed		7.50	0.11		1.50	2.30	
Eurasian watermi	ilfoil	6.30	0.06		1.00	1.30	
Northern watermi	lfoil	5.00	0.06		1.13	1.10	
Largeleaf pondwe	eed	3.10	0.06		1.80	1.10	
Small pondweed		3.10	0.06		1.80	1.10	
Spiny naiad		1.30	0.04		3.00	0.80	
Elodea		0.60	0.01		1.00	0.10	
Bladderwort		0.60	0.01		1.00	0.10	
Nitella sp.		0.60	0.01		1.00	0.10	



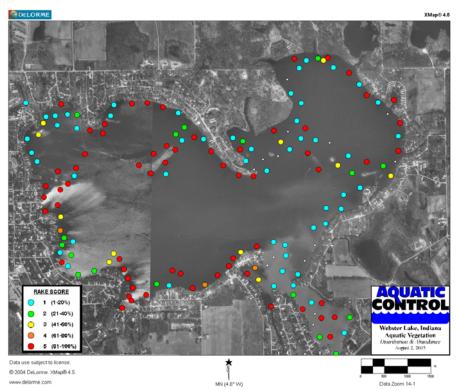


Figure 13. Webster Lake, overall aquatic vegetation distribution and density, August 2, 2005

A total of 15 species were collected of which 13 of the species were native. Eurasian watermilfoil and curlyleaf pondweed were the only exotic species collected. Coontail was present at the highest percentage of sample sites (66%) and also had the highest relative density (Figure 14). Slender naiad ranked second in site frequency (28%) and relative density (Figure 15). Curlyleaf pondweed ranked third in site frequency (20%) but ranked fourth in relative density (Figure 16). Chara ranked fourth in site frequency (13%) but ranked third in relative density (Figure 17). Flatstem pondweed ranked fifth in site frequency (9%) and relative density. Water stargrass ranked sixth in site frequency (8%) and relative density followed by sago pondweed. Eurasian watermilfoil ranked eighth in site frequency (6%). Location and density of Eurasian watermilfoil is illustrated in Figure 18. Northern watermilfoil, largeleaf pondweed, small pondweed, spiny naiad, elodea, bladderwort, and nitella were also present at lower site frequencies and relative densities.



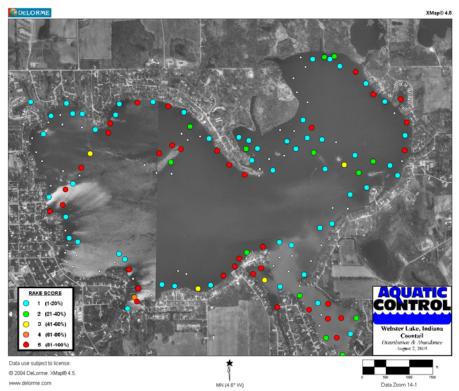


Figure 14. Webster Lake, coontail distribution and abundance, August 2, 2005

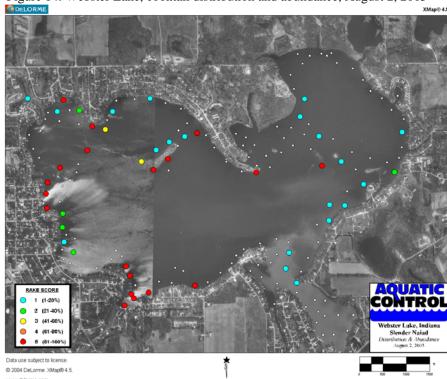


Figure 15. Webster Lake, slender naiad distribution and abundance, August 2, 2005



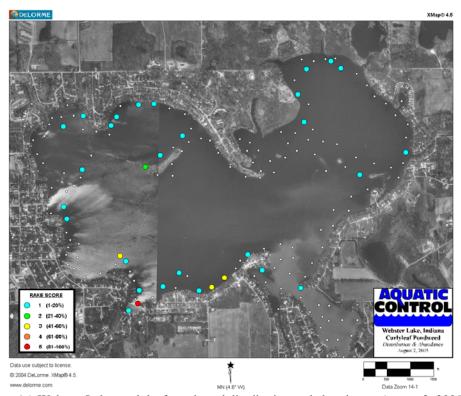


Figure 16. Webster Lake, curlyleaf pondweed distribution and abundance, August 2, 2005

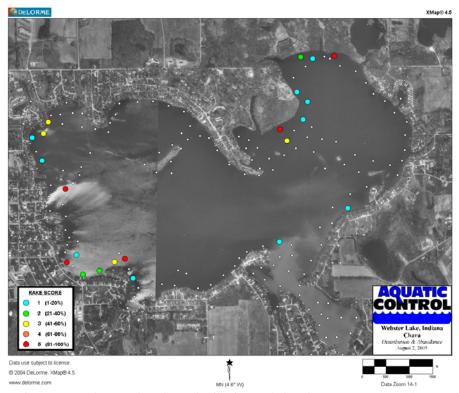
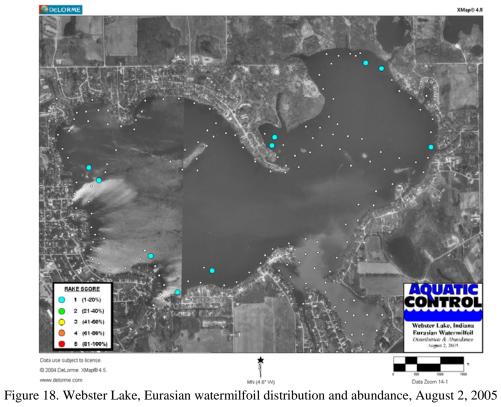


Figure 17. Webster Lake, chara distribution and abundance, August 2, 2005







Backwater Lake Sampling Results

April Tier II survey, Backwater Lake

On April 15, 2005 a Tier II survey was completed on Backwater Lake. A Secchi disk reading was taken prior to sampling and was found to be at 2.5 feet. Plants were present to a maximum depth of 5 feet. Forty-two sites were randomly selected within the littoral zone. Results of the sampling are listed in Table 4. Overall aquatic vegetation distribution and density is illustrated in Figure 19.

Table 4. Occurrence and abundance of submersed aquatic plants in Backwater Lake April 15, 2005.

Lake April 1	13, 2003.						
Date:	4/15/2005	,	Littoral sites with plants:	35		Species diversity:	0.61
Littoral depth (ft):	5	,	Number of species:	3		Native diversity:	0.00
Littoral sites:	42		Maximum species/site:	3		Rake diversity:	0.52
Total sites:	42		Mean number species/site:	1.17		Native rake diversity:	0.00
Secchi:	2.5	,	Mean native species/site:	0.62		Mean rake score:	2.03
Common Name		Site frequency	Relative density		Mean density	Dominance	
Coontail		61.90	1.26		2.04	25.20	
Eurasian watermil	foil	28.60	0.45		1.58	9.00	
Curlyleaf pondwee	ed	26.20	0.26		1.00	5.20	

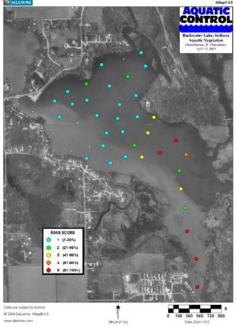


Figure 19. Backwater Lake, overall aquatic vegetation distribution and density, April 15, 2005



A total of 3 species were collected of which two were exotics, curlyleaf pondweed and Eurasian watermilfoil. Coontail was present at the highest percentage of sample sites (61%) and relative density. Location and density of coontail is illustrated in Figure 20. Eurasian watermilfoil was ranked second in site frequency (28%) and relative density (Figure 21). Curlyleaf pondweed was ranked last in site frequency (26%) and relative density (Figure 22).

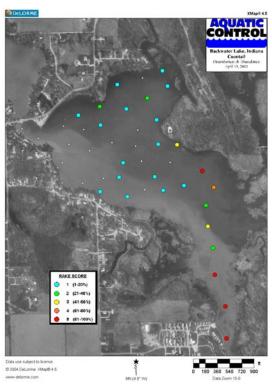


Figure 20. Backwater Lake, coontail distribution and abundance, April 15, 2005



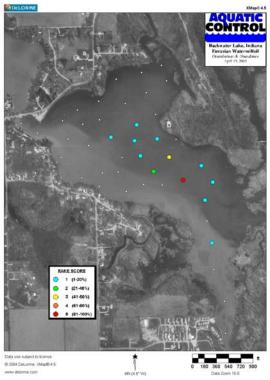


Figure 21. Backwater Lake, Eurasian watermilfoil distribution and abundance, April 15, 2005

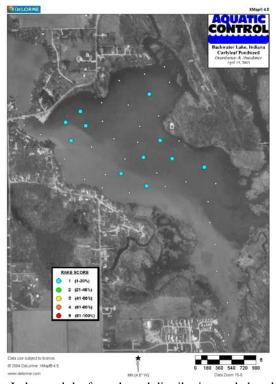


Figure 22. Backwater Lake, curlyleaf pondweed distribution and abundance, April 15, 2005

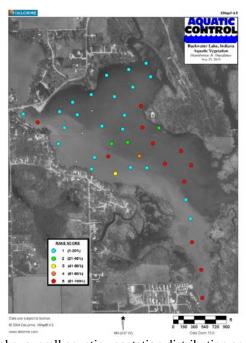


May Tier II survey, Backwater Lake

On May 25, 2005 a second Tier II survey was completed on Backwater Lake. A Secchi disk reading was taken prior to sampling and was found to be 4.0 feet. Plants were present to a maximum depth of 6 feet. The same forty-two sites were sampled in May as in the April 2005 survey. Results of the sampling are listed in Table 5. Overall aquatic vegetation distribution and density is illustrated in Figure 23.

Table 5. Occurrence and abundance of submersed aquatic plants in Backwater Lake May 25, 2005.

Lake May 2	<i>5, 2005.</i>						
Date:	5/25/2005		Littoral sites with plants:	39		Species diversity:	0.63
Littoral depth (ft):	6		Number of species:	4		Native diversity:	0.06
Littoral sites:	42		Maximum species/site:	3		Rake diversity:	0.65
Total sites:	42		Mean number species/site:	1.50		Native rake diversity:	0.04
Secchi:	4		Mean native species/site:	0.79		Mean rake score:	2.26
Common Name		Site frequency	Relative density		Mean density	Dominance	
Coontail		76.20	1.26		1.66	25.20	
Curlyleaf pondwe	ed	40.50	0.64		1.59	12.90	
Eurasian watermi	lfoil	31.00	0.95		3.08	19.00	



 $Figure\ 23.\ Backwater\ Lake,\ overall\ aquatic\ vegetation\ distribution\ and\ density,\ May\ 25,\ 2005$



A total of 3 species were collected of which two species were exotics, curlyleaf pondweed and Eurasian watermilfoil. Coontail was present at the highest percentage of sample sites (76%) and had the highest relative density. Location and density of coontail is illustrated in Figure 24. Curlyleaf pondweed ranked second in site frequency (40%) but ranked third in relative density (Figure 25). Eurasian watermilfoil ranked third in site frequency (31%) but ranked second in relative density. Location and density of Eurasian watermilfoil is illustrated in Figure 26.

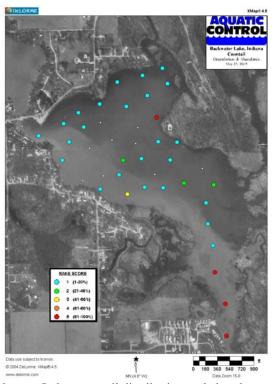


Figure 24. Backwater Lake, coontail distribution and abundance, May 25, 2005



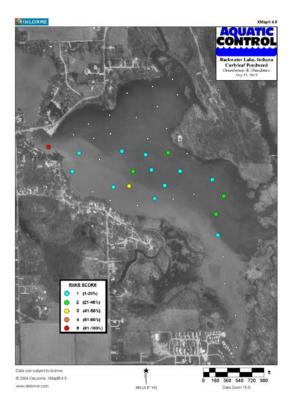


Figure 25. Backwater Lake, curlyleaf pondweed distribution and abundance, May 25, 2005

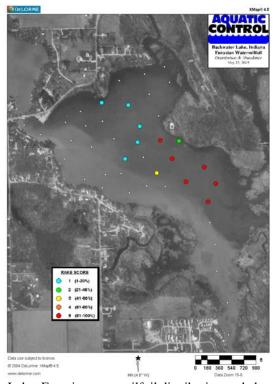


Figure 26. Backwater Lake, Eurasian watermilfoil distribution and abundance, May 25, 2005



August Tier II survey, Backwater Lake

On August 2, 2005 a third Tier II survey was completed on Backwater Lake. A Secchi disk reading was taken prior to sampling and was found to be 2.5 feet. Plants were present to a maximum depth of 6 feet. The same forty-two sites were sampled in August as in the April and May surveys. Results of the sampling are listed in Table 6. Overall aquatic vegetation distribution and density is illustrated in Figure 27.

Table 6. Occurrence and abundance of submersed aquatic plants in Backwater Lake August 2, 2005.

Lake Augus	t 2, 2005	5.					
Date:	8/2/2005		Littoral sites with plants:	42		Species diversity:	0.56
Littoral depth (ft):	6		Number of species:	8		Native diversity:	0.26
Littoral sites:	42		Maximum species/site:	4		Rake diversity:	0.38
Total sites:	42		Mean number species/site:	1.55		Native rake diversity:	0.12
Secchi:	2.5		Mean native species/site:	1.12		Mean rake score:	3.50
Common Name		Site frequency	Relative density		Mean density	Dominance	
Coontail		97.60	3.12		3.20	62.40	
Eurasian watermi	lfoil	33.30	0.62		1.86	12.40	
Curlyleaf pondwe	ed	9.50	0.10		1.00	1.90	
Sago pondweed		7.10	0.12		1.67	2.40	
Slender naiad		2.40	0.02		1.00	0.50	
Bladderwort		2.40	0.02		1.00	0.50	
Flatstem pondwee	ed	2.40	0.02		1.00	0.50	
Nitella sp.		2.40	0.02		1.00	0.50	



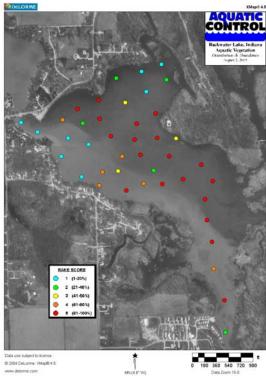


Figure 27. Backwater Lake, overall aquatic vegetation distribution and density, August 2, 2005

A total of 8 species were collected of which two species were exotic, curlyleaf pondweed and Eurasian watermilfoil. Coontail was present at the highest percentage of sample sites (97%) and had the highest relative density (Figure 28). Eurasian watermilfoil ranked second in site frequency (33%) and relative density (Figure 29). Curlyleaf pondweed ranked third in site frequency (9%) but ranked fourth in relative density (Figure 30). Sago pondweed, slender naiad, bladderwort, flatstem pondweed, and nitella were all present at a lower abundance and density.



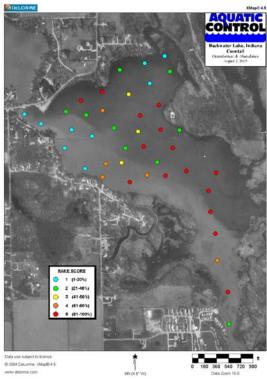


Figure 28. Backwater Lake, coontail distribution and abundance, August 2, 2005

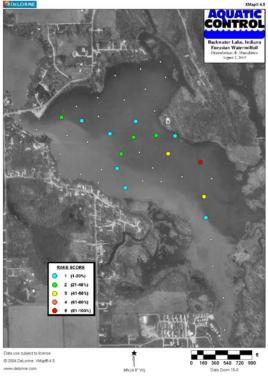


Figure 29. Backwater Lake, Eurasian watermilfoil distribution and abundance, August 2, 2005



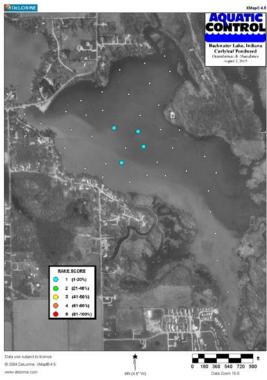


Figure 30. Backwater Lake, curlyleaf pondweed distribution and abundance, August 2, 2005

Plant Sampling Discussion

Backwater Lake was sampled along with Webster Lake due to the belief that the Eurasian watermilfoil was originating in Backwater. Due to the differences in the two ecosystems we sampled them separately and will discuss the sampling results separately.

Webster Lake Sampling Discussion

The goal of the 2005 management actions was to decrease the abundance and density of nuisance exotic vegetation and increase the abundance and density of native vegetation. This season's sampling results indicated that native vegetation had improved when compared to past surveys. A larger percentage of sample sites had vegetation, more native species were collected, and there were increases in native species richness and mean rake density by the August survey (Figures 31-34). Several of the figures show a decrease in these metrics during the April 2005 survey. This was expected since most native aquatic plants are not actively growing at this time. The most informative data can be gleaned by comparing the 2003, 2004, and the August 2005 data because these surveys were all completed in the late summer.



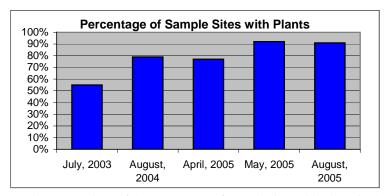


Figure 31. Webster Lake, comparison of the percentage of sample sites with plants in the last five surveys.

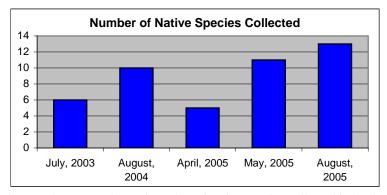


Figure 32. Webster Lake, comparison of number of native species collected in the last five surveys.

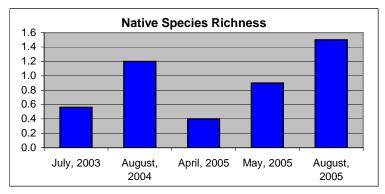


Figure 33. Webster Lake, comparison of native species richness in the last five surveys.

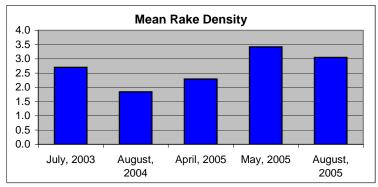


Figure 34. Webster Lake, comparison of mean rake density in the last five surveys.



The apparent increase in native species abundance and density corresponded with an apparent reduction in Eurasian watermilfoil by late summer of 2005. This reduction was likely due to aggressive application of Renovate herbicide that took place in late April and May of 2005. The reduction in milfoil may have aided in the increase in native species metrics by reducing competition between natives and exotics. Figures 35 and 36 graphically illustrate the reduction in Eurasian watermilfoil density and abundance by the August survey.

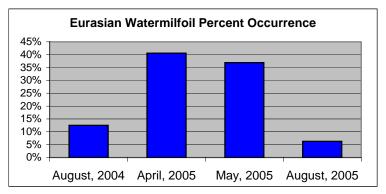


Figure 35. Webster Lake, Eurasian watermilfoil percent occurrence in the last four surveys.

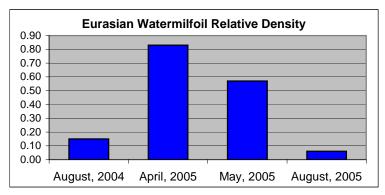


Figure 36. Webster Lake, Eurasian watermilfoil relative density in the last four surveys.

Eurasian watermilfoil has been the primary focus of the management activities since 1999. This species was managed with two whole-lake fluridone treatments in 1999 and 2002. Figure 37 graphically illustrates the changes in the abundance of this species experienced since 2001. This figure shows how quickly this species can reinfest following whole lake treatments. It appears that a maximum of three to four years control can be achieved if fluridone is not followed up with selective spot treatments (whole lake fluridone treatment was completed after the 2002 sampling).



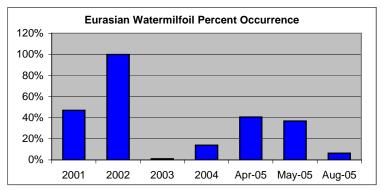


Figure 37. Eurasian watermilfoil percent occurrence in the last seven surveys (different survey techniques used in 2001 and 2002).

Curlyleaf pondweed has become a serious problem in Webster Lake. This species continues to create nuisance conditions, especially in the spring. Dense beds of this species reached the surface and created nuisance conditions from April through June. These beds naturally died off by mid-summer. It was initially planned that some areas of curlyleaf would be treated in 2005, but due to a dramatic increase in Eurasian watermilfoil, LARE funds were not used for curlyleaf pondweed treatments. An aggressive curlyleaf pondweed treatment program should be initiated in 2006 in order to address this problem. Figures 38 and 39 graphically illustrate the extent of curlyleaf pondweed infestation witnessed in the spring of 2005.

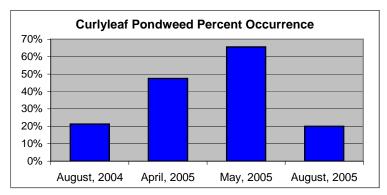


Figure 38. Webster Lake, curlyleaf pondweed percent occurrence in the last three surveys.

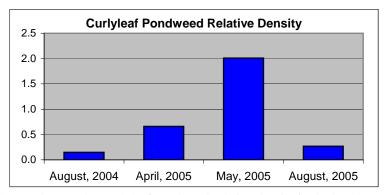


Figure 39. Webster Lake, curlyleaf pondweed relative density in the last three surveys.



The sampling data suggests that this seasons selective treatments of Eurasian watermilfoil had overall positive effects on the aquatic plant community of Webster Lake. However, it is difficult to predict how much Eurasian watermilfoil will return in 2006. This season's prediction was well below what actually occurred, and the Association had to use their own funds to complete many of the treatments. Along with the milfoil problems, it is apparent that curlyleaf pondweed is continuing to spread and this situation needs to be addressed. Treatment of curlyleaf pondweed will likely have positive effects on native vegetation and will certainly reduce nuisance conditions.

Backwater Lake Sampling Discussion

Discussion of Backwater Lake is included in the "Webster Lake AVMP" due to the belief that Webster Lake's Eurasian watermilfoil infestation originates in or above this lake. Backwater Lake was treated in 2005 with contact and systemic herbicides in order to reduce nuisance conditions and control the spread of Eurasian watermilfoil. These treatments appeared to have no negative effects on native vegetation as illustrated in Figures 40-43. Actually, there appears to have been an increase in the abundance and density of native species in the last four surveys.

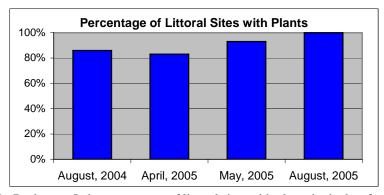


Figure 40. Backwater Lake, percentage of littoral sites with plants in the last four surveys.

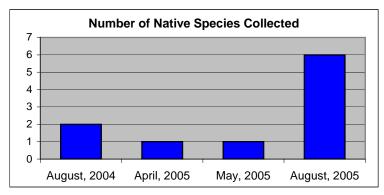


Figure 41. Backwater Lake, number of native species collected in the last four surveys.



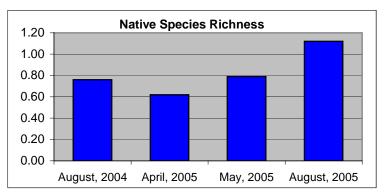


Figure 42. Backwater Lake, native species richness in the last four surveys.

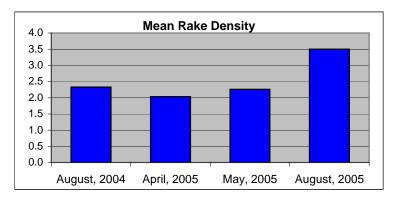


Figure 43. Backwater Lake, mean rake density in the last four surveys.

In 2005, Eurasian watermilfoil was treated with funds generated by the Webster Lake Conservation Association. The primary focus of these treatments was on areas closest to the stream connecting the two waterbodies. The treatments were effective at controlling milfoil in these areas, but the exotic species appeared in new areas after treatment as illustrated in Figures 44 and 45. In order to reduce the abundance of milfoil in Backwater Lake a more aggressive approach should be taken in 2006.

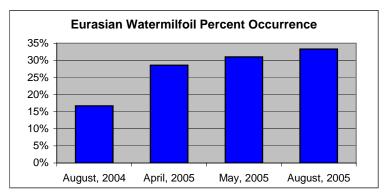


Figure 44. Backwater Lake, Eurasian watermilfoil percent occurrence in the last four surveys.



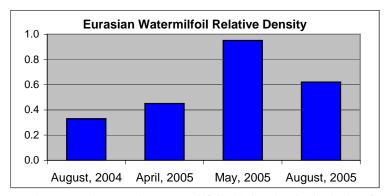


Figure 45. Backwater Lake, Eurasian watermilfoil relative density in the last four surveys.

2005 VEGETATION CONTROL

In general, the goals of the vegetation management plan are to control nuisance aquatic species, with a focus on exotic nuisance plants, while preserving and enhancing native vegetation. In 2005, treatments were completed with Renovate herbicide in order to selectively control this species everywhere it occurred. Along with this treatment, it was also planned to treat at least 10 acres of curlyleaf pondweed. Following the April sampling, it was determined that the funds should be used exclusively for control of Eurasian watermilfoil due to the extent of the infestation and the fact that curlyleaf pondweed would likely die off by the busy boating season. A total of 42.0 acres of milfoil was treated on April 26 with Renovate herbicide. The focus of the treatment was along the southeast, east, and northwestern shorelines of the lake as well as an area around the island on the northwest side of Webster Lake (Figure 46). This treatment was funded by LARE.

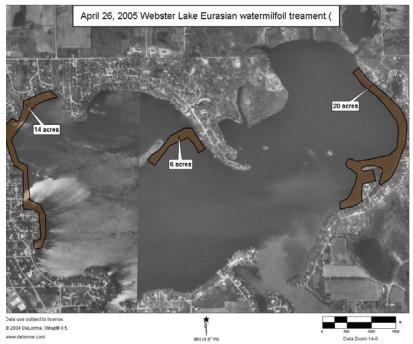


Figure 46. Webster Lake, Eurasian watermilfoil treatment areas, April 26, 2005.



It became apparent that a second treatment would be needed in the Webster Bay and Backwater area. All LARE funds had been used in the first treatment, but the Association saw the need for an additional treatment and agreed to come up with the funding. A total of 15.5 acres were treated with Renovate on June 1 (Figure 47).



Figure 47. Webster and Backwater Lake, Eurasian watermilfoil treatment areas, June 1, 2005.

It was also apparent that native species were beginning to create nuisance conditions in near-shore areas. Along with the Renovate treatments, shoreline treatments were completed to both Webster and Backwater Lakes to relieve these conditions. A total of 80.0 acres was treated on Webster and 7.0 on Backwater (Figures 48 & 49). The primary targeted species were coontail and curlyleaf pondweed. The Webster Lake Conservation Association funded treatment of Webster Lake while a collection of homeowners from Backwater Lake funded treatment on their lake.



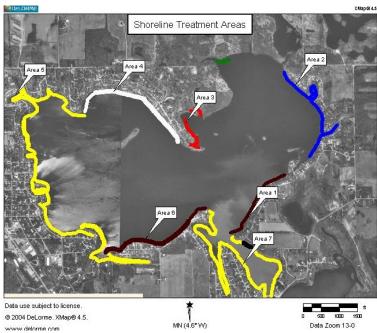


Figure 48. Webster Lake, shoreline treatment areas, June 1, 2005.



Figure 49. Backwater Lake, shoreline treatment areas, June 1, 2005.

Several weeks following the June 1st treatments, filamentous algae began creating nuisance conditions in near shore areas of Webster Lake. Filamentous algae was hampering boat traffic, swimming, and was an eye-sore to homeowners. A treatment of filamentous algae was funded by the Association and completed using copper sulfate on June 28, 2005. A total of 21.5 acres was treated in the most impaired shoreline areas (Figure 50).



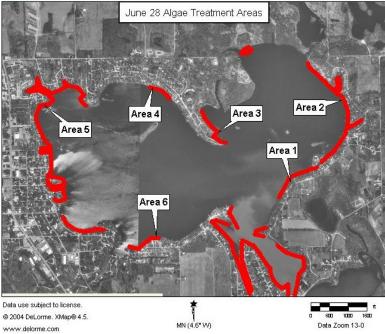


Figure 50. Webster Lake, shoreline algae treatment areas June 28, 2005.

In July, common naiad began reaching nuisance levels in and around many shoreline areas (naiad grows from seed and typically begins growing in early summer and reaches maximum density by late summer). It was not permitted to treat native species this late in the season, so District Fisheries Biologist Jed Pearson inspected the lake with representatives from the Association and Aquatic Control. Mr. Pearson approved treatment of 3.0 acres of naiads (Figure 51). The only areas approved were areas where boating was severely impaired. Treatment was completed to these areas on July 21, 2005 with a mixture of contact herbicides.





Figure 51. Webster Lake, naiad treatment areas, July 21, 2005.

In mid-August another algae treatment was required to relieve nuisance conditions in near-shore areas. There is no long term control for algae and conditions in 2005 were ideal for growth of filamentous algae in many Indiana lakes (little rain, warm sunny days, and clear water). Treatment was completed on 14.0 acres of filamentous algae on August 11, 2005 (Figure 52).

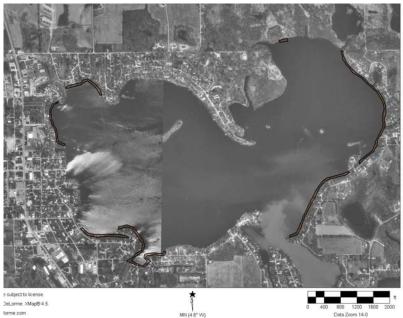


Figure 52. Webster Lake, algae treatment areas, August 11, 2005.

During the algae treatment a small area of Eurasian watermilfoil was noticed near the outflow of Backwater Lake near the public access site. It was feared that this bed of



milfoil could quickly reinfest the Webster Bay area that was treated earlier in the season with Renovate herbicide. Treatment of the boat ramp area as well as several small patches in Backwater Lake was completed on August 23, 2005 with Renovate herbicide (Figure 53). The treatment area totaled 7.0 acres and was funded by the WLCA.



Figure 53. Backwater Lake, Eurasian watermilfoil treatment areas, August 23, 2005.

Table 6 is a summary of the 2005 herbicide applications. This season was a much more active year when it came to vegetation control activities. When attempting to control Eurasian watermilfoil with spot treatments, there will likely be a need for these multiple treatments (it is impossible to treat every area where milfoil grows and this species spreads rapidly, especially in Webster Lake). Webster Lake has also experienced much clearer water in 2005. This may have led to increased nuisance algae growth requiring multiple treatments. It is unclear if the need for these treatments will be reduced in future seasons.

Table 7. Webster Lake, 2005 herbicide application summary.

	* * * * * * * * * * * * * * * * * * * *	,			
Date	Lake Treated	Species Targeted	Herbicide Used	Acreage	Funded By
4/26/2005	Webster	Eurasian Watermilfoil	Renovate	42.0	LARE & WLCA (10%)
6/1/2005	Webster	Nuisance shoreline species	Reward/Nautique	80.0	WLCA
6/1/2005	Webster & Backwater	Eurasian Watermilfoil	Renovate	15.5	WLCA
6/1/2005	Backwater	Nuisance shoreline species	Reward/Nautique	7.0	Backwater
6/28/2005	Webster	Filamentous algae	Copper Sulfate	21.5	WLCA
7/21/2005	Webster	Naiads	Reward/Nautique	3.0	WLCA
8/11/2005	Webster	Filamentous algae	Copper Sulfate	14.0	WLCA
8/23/2005	Backwater	Eurasian Watermilfoil	Renovate	7.0	WLCA



ACTION PLAN AND BUDGET UPDATE

The action plan from last seasons AVMP update underestimated the extent of the Eurasian watermilfoil that would occur this season. Originally, it was planned that a maximum of 40 acres of milfoil and/or curlyleaf pondweed would require treatment, but actually 64.5 acres was treated on Webster and Backwater Lake. Even after treating 64.5 acres, some patches of milfoil appeared in new areas on Webster and some areas on Backwater were neglected due to their distance from the entrance to Webster. It is anticipated that up to 60 acres of milfoil may require treatment on Webster and 25 acres on Backwater in 2006 (Figure 53 & 54). This estimate is based on the amount that remained in Backwater Lake, the new areas that were observed in late September on Webster Lake, and the fact that milfoil spreads rapidly in this system.

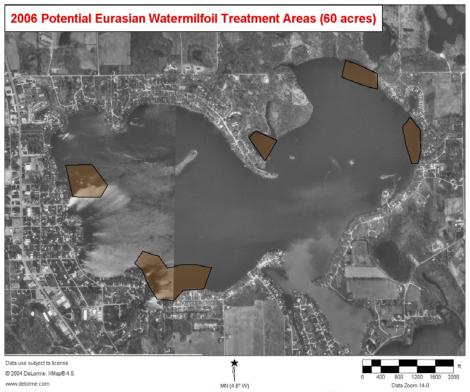


Figure 54. Webster Lake, potential Eurasian watermilfoil treatment areas.





Figure 55. Backwater Lake, potential Eurasian watermilfoil treatment areas.

If following spring surveys, it becomes apparent that more than 100 acres of Eurasian watermilfoil will require treatment, then a whole lake fluridone treatment would be more cost effective than treating Eurasian watermilfoil with Renovate every season. It will be important to further evaluate the costs of using Renovate versus fluridone at the end of next season. If the Renovate treatments cannot get ahead of the milfoil (able to treat less in successive seasons), it would be more cost effective to switch back to whole lake treatment strategy in order to get ahead of the problem and then follow up in successive seasons with much smaller-scale Renovate applications.

Along with the milfoil problem, it became apparent this season that curlyleaf pondweed was continuing to spread and should be aggressively controlled. Enormous beds of this species reached the surface in several areas around the lake. It is estimated that up to 125 acres of curlyleaf pondweed may require treatment in 2006 (Figure 55). This estimate was made from observations and the May tier II data. An early spring survey should be completed in order to create an accurate treatment map. This survey will need to take place in early to mid April and should use the tier II method.



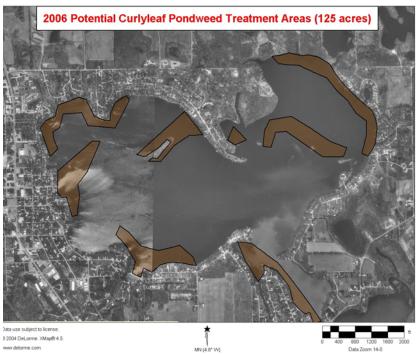


Figure 56. Webster Lake, potential curlyleaf pondweed treatment areas.

In order to obtain long-term control of curlyleaf pondweed, one should complete this treatment for three successive seasons. This treatment should take place shortly after ice-out, prior to turion production. Treating curlyleaf pondweed later in the season is simply a short-term control, since the plants have already produced their reproductive structures. Aquathol K is by far the best herbicide for controlling this species (see the 2004 plan, page 37 & 38, for more details on the effectiveness of this control). One drawback to a large-scale Aquathol K treatment is the 3-day fish harvest restriction (this is currently still on the Aquathol label, but may be removed by the spring of 2006 following the completion of the re-registration process). The fish harvest restriction will require detailed notices to be placed well before application at all boat launch areas, shoreline residences, and the local newspaper.

It will also be necessary to complete shoreline contact herbicide treatments in order to relieve residents of nuisance conditions caused by native vegetation. These treatments should not extend beyond 100 feet from the shoreline and should include only the areas treated this past season. Treatments should also be scheduled later in June in order to obtain some control of naiad that reached nuisance levels late last summer.

Along with herbicide applications, it will be important to continue monitoring the vegetation in a similar fashion. Three tier II surveys should be sufficient to keep track of any major changes in the plant population and make appropriate management decisions. These surveys should be completed near the same time as they were in 2006, with the exception of the early spring survey, which should be moved up one to two weeks



depending on weather conditions. This survey will provide data that will aid in the selection of curlyleaf pondweed and milfoil treatment areas.

A budget for the proposed applications and sampling is provided below. The budget includes the estimated costs of treatments that should be eligible for funding by LARE and treatments funded solely by the WLCA. The budget extends for the next three seasons. If all goes as planned, the renovate treatment areas will decrease each successive season much like we have observed on other natural lakes. However, Webster Lake seems to provide the perfect habitat for milfoil reinfestation.

Table 8. Webster Lake budget estimate for the next three seasons.

	2006	2007	2008
Early season curlyleaf pondweed treatment (125 acres)	\$37,500	\$37,500	\$37,500
Renovate treatment for selective milfoil control	\$36,125	\$33,250	\$29,000
Developed shoreline treatment (including algae not to exceed 80 acres)	\$32,960	\$32,960	\$32,960
Plant Sampling and plan update	\$6,000	\$6,000	\$6,000
Total LARE Funding Request:	\$79,625	\$75,375	\$71,125
Total Funded Strictly by Association:	\$32,960	\$32,960	\$32,960

It is recommended that the WLCA request \$79,625 from the LARE program in order to complete vegetation controls on Webster Lake in 2006. This is a large increase from the amount requested last season, but the author of this report was under the impression that only \$20,000 would be allocated and that was made apparent this season that \$20,000 was well below what will be required to improve long-term conditions on Webster Lake. These treatments are not set up to be maintenance treatments. The curlyleaf program will not be needed following 2008, with the exception of small scale spot treatments, and the Renovate treatments should effectively reduce milfoil to a level that is manageable by the Association. This budget is a rough estimate, especially for 2007 and 2008. Future trends in vegetation communities are very difficult to predict, but with the aggressive sampling protocol, Webster Lake may become more predictable.

PUBLIC INVOLVEMENT

A public meeting was held at the Webster Lake Community Center on September 21, 2005. The meeting was designed to educate lake users on the benefits of aquatic vegetation, 2005 vegetation controls, and the future of aquatic plant management on Webster Lake. The meeting was also used to gain input from lake users concerning their perceptions of aquatic vegetation and satisfaction or dissatisfaction concerning vegetation control techniques. Approximately 50 individuals were in attendance of which 45 filled out a lake use survey. Eighty-five percent of those surveyed own property on the lake and 80% are members of a lake association. Eighty-five percent use the lake for boating,



82% fishing, 80% swimming, and 42% use the lake for irrigation. Ninety-three percent of those surveyed indicated that they were in favor of continuing vegetation control efforts. Many of those in attendance expressed their concerns about the increase in native vegetation in and around their dock areas. It was expressed that this vegetation is beneficial to fisheries, but efforts would be made to reduce the nuisance effects near dock areas. Annual public meetings should be completed in order to keep the management plan properly updated.



APPENDIX UPDATE 2005 Plant Sampling Data

Webster Lake

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	Webster	4/15/05	41.32727	-85.6916	267	7.0	1		1						1		D		



Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	CH?AR	NAFL	ELCA7	POZO	SpeNum	NatSpeNum	Species Cod	es
Webster	4/15/05	41.32645	-85.6927	268	5.0	3		1		3				2	1	BIBE	Bur marigold
Webster	4/15/05	41.32667	-85.6939	269	4.0	4		- 1		2				3		CEDE4	Coontail
Webster	4/15/05	41.32602	-85.694	270	5.0	5	5	1			-			2	0	CH?AR	Chara
Webster	4/15/05	41.32517	-85.6939	271	5.0	5	3	1			3			3		ELCA7	Elodea
Webster	4/15/05	41.32554	-85.6929	272	6.0	5		2		2	2			3		LEMN	Duckweeds
Webster	4/15/05	41.32484	-85.6927	273	5.0	4	2			_				2		MYHE	Broadleaf watermitfoil
Webster	4/15/05	41.32403	-85.6927	274	3.0			1						2		MYSI	Northern watermilfoil
Webster	4/15/05		-85.6924	275	4.0									0		MYSP2	Eurasian watermilfoil
Webster	4/15/05	41.32337	-85.6917	276	3.0								_	0		MYVE	Whorled watermilfoil
Webster	4/15/05	41.32317	-85.6926	277	5.0	NP							_	0		NAFL	Slender naiad
Webster	4/15/05	41.32273	-85.6927	278	4.0	2	2							1	0	NAGU	Southern waternymph
Webster	4/15/05	41.32213	-85.6926	279	3.0	1				1				1	1	NAMA	Spiny naiad
Webster	4/15/05	41.32255	-85.6918	280	5.0	NP.			_	,			_	0			
Webster	4/15/05	41.32192	-85.6921	281	4.0	NP				_	_		_	0		NAMI	Brittle waternymph
Webster	4/15/05	41.3214	-85.6913	282	3.0			-			_		-			NELU	American lotus
	4/15/05	41.32162	-85.69					1		1	_	-		2		NI?TE	Nitella
Webster	4/15/05			283	2.0	3				2				2			No aquatic vegetation
Webster		41.32215	-85.6889	284	5.0									0		NULU	Yellow pond fily
Webster	4/15/05	41.32266	-85.6885	285	7.0			1						1	0	NYTU	White water fily
Webster	4/15/05	41.32234	-85.6881	286	7.0	1		1						1		POAM	Large-leaf pondweed
Webster	4/15/05	41.32173	-85.6877	287	6.0	4	1	1	1		2			4		POCR3	Curly-leaf pondweed
Webster	4/15/05	41.32119	-85.6874	288	3.0	1				1	1			2	2	POFO3	Leafy pondweed
Webster	4/15/05	41.32061	-85.687	289	7.0	2		2						2	0	POGR8	Variable pondweed
Webster	4/15/05	41.3201	-85.6873	290	4.0	4		1	2		1			4	2	POIL	Illinois pondweed
Webster	4/15/05	41.31944	-85.6879	291	3.0	2	2				7			1	0	PONO2	American pondweed
Webster	4/15/05	41.31986	-85.6871	292	7.0	3	1	1	3					3	1	POPE6	Sago pondweed
Webster	4/15/05	41.3202	-85.686	293	3.0	1	Contract of			1	- 1	16.5		2	2	POPR5	White-stemmed pondweed
Webster	4/15/05	41.32084	-85.6852	294	6.0	5	3	- 1						2		POPU7	Small pondweed
Webster	4/15/05	41.32077	-85.6842	295	6.0	2		2						1	0	PORI2	Richardson's pondweed
Webster	4/15/05	41.32166	-85.6839	296	8.0	NP								0		POZO	Flat-stemmed pondweed
Webster	4/15/05	41.32147	-85.6833	297	8.0	1		1						2		UTMA	Common bladderwort
Webster	4/15/05	41.32061	-85.6823	298	6.0	3		1			-		_	2		VAAM3	Wild celery, eel grass
Webster	4/15/05	41.3208	-85.6814	299	6.0									0		WO7LF	Watermeal
Webster	4/15/05	41.32136	-85.6804	300	7.0	NP								0		ZAPA	Horned pondweed
Webster	4/15/05	41.32192	-85.6795	301	9.0	1	1						_	1		ZODU	Water stargrass
Webster	4/15/05	41.32238	-85.6791	302	8.0	1			1		1		-	2		2000	water staryrass
Webster	4/15/05	41.32273	-85.6785	303	5.0	1		- 1	-	_	- 1		-	2		Count	34
Webster	4/15/05	41.32309	-85.6773	304	8.0	NP						-	_			Count	34
Webster	4/15/05	41.32335	-85.676	305	6.0	NP				-			_	0			
Webster	4/15/05	41.32333	-85.6751	306	7.0	NP NP							-	0		_	
Webster	4/15/05	41.32253	-85.675	307	6.0	NP NP								0			
Webster	4/15/05	41.32243	-85.676	308		NP NP							-	0			
Webster	4/15/05	41.32243			5.0	NP NP		_						0			
		41.32196	-85.6764	309	4.0	107.75								0	-		
Webster	4/15/05		-85.6774	310	3.0	1		1					- 1	2			
Webster	4/15/05		-85.678	311	3.0	3			3	1				2			
Webster	4/15/05	41.3211	-85.6771	312	3.0	1	1	1						2			
Webster	4/15/05	41,31952	-85.6761	313	3.0	1		1						1			
Webster	4/15/05	41.32072	-85.6759	314	3.0	1		1			1			1	0		
Webster	4/15/05	41,32021	-85.6744	315	4.0	1	1	1	1		1			3	1		
Webster	4/15/05	41.31935	-85.6737	316	5.0			1	1					2	1		
Webster	4/15/05	41.31907	-85.6727	317	5.0	NP								0	0		
Webster	4/15/05	41.31883	-85.6722	318	4.0	NP								0	0		
Webster	4/15/05	41.31843	-85.6728	319	3.0	4	4							1	0		
Webster	4/15/05	41.3177	-85.6723	320	4.0	1		1						1	0		
Webster	4/15/05	41.31772	-85.6715	321	5.0	NP								0			



Species Codes BIBE Bur marigold	Coontail	Chara	Duckweeds	Broadleaf watermilfoil	Northern watermilloil	Whorled watermilfoil	Slender naiad	Southern waternymph	Brittle waternymoh	American lotus	Nitella	No aquatic vegetation	Yellow pond fily	White water lify	Large-leaf pondweed	Curly-leaf pondweed	Learly pondweed	Illinois pondusad	American pondweed	Sago pondweed	White-stemmed pondweed	Small pondweed	Richardson's pondweed	Common bladdonard	Wild celery, eel grass	Watermeal	т			34																																											
pecies Co BIBE	CEDE4	EL CA7	LEMN	MYHE	MYSP2	MYVE	NAFL	NAMA	NAMI	NELU	NIPTE	NOAQVC	NULU	NYTO	POAM	POCH3	200	100	PONO2	POPE6	POPRS	POPU7	PORIZ	DZCI.	VAAM3	WO?LF	ZAPA	ZODN		Count																																											
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Depth RA	5.0	4.0	3.0	5.0	4.0	4.0	5.0	9.0	0.0	8.0	3.0	6.0	6.0	7.0	6.0	3.0	3.0	0.7	80	6.0	3.0	2.0	4.0	2.0	200	6.0	6.0	6.0	6.0	6.0	5.0	5.0	4.0	4.0	4.0	0,4	200	4.0	4.0	12.0	5.0	7.0	10.0	5.0	2.0	5.0	8.0	5.0	5.0	3.0	5.0	4.0	4.0	3.0	9.0	0.0	0.0	207	80	800	200	0.0	200	140	6.0	3.0	10.0	8.0	13.0	9.0	8.0	11.0	10.0
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angitude 85,6711	85.6704	-85.67	85.6722	-85.673	85.6744	85.6741	85.6735	85.6727	85,6719	85.6718	85.6707	85.6705	85.6692	85.6698	85.6709	85.6724	85.6733	85.6727	85 6701	85.6686	85.6674	85.6668	85.6664	85.6662	2000C	-85.667	85.6665	85.6678	85.6686	85.6692	-85.67	85.6713	85.6717	-85.672	65,6725	85.67.34	SE 674	85.6749	85.6746	85.6738	85.6741	85.6735	85.6738	85.6748	85.6759	85.6754	85.6747	85.6756	85.6768	85.6777	85.6792	85.6786	85.6781	85.6775	85.6765	02.07/10	65.6787	85 6808	85 6815	85,6820	85,6831	85 6837	00.0007 05.6045	85 6844	85.6856	85.6865	85.6854	85.6844	85,6836	-85.683	85.6835	85.6846	85.6859
atitude L	.31794	31887	.31972	31975	.32076	.32142	.32223	.32316	32416	32537	.32533	.32614	.32656	.32745	1.3279	.32766	.32863	.32838	32847	.32811	.32786	.32728	.32812	.32874	33041	33094	33177	.33164	.33205	.33271	.33339	.33371	.33429	33414	.33425	33413	33368	41.333	.33219	.33159	.33054	.33009	.32951	.32989	.32997	1.3293	.32885	.32845	.32824	.32886	32955	.32885	.32817	.32766	.32757	.32725.	.32/31	32872	32045	20050	32938	32883	20000	32730	32741	1 3279	.32859	.32904	.32973	.33016	.33101	.33136	.33162
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Species Code BIBE CEDE4 CH?AR	ELCA7 LEMN	MYHE	MYSP2	NAFL	NAMA	NAMI	NELU	NOAQVG	NOLU	POAM	POCR3	POF03	POGR8	PONO2	POPE6	POPHS POPHS	PORIZ	POZO	UTMA	VAAM3	ZAPA	ZODU		Count																																			
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des Bur marigold	Coontail	Elodea	Duckweeds Broadlast watermilfoil	Northern watermilfoil	Eurasian watermilfoil Whorled watermilfoil	Slender naiad	Southern waternymph	Spirity natad	American lotus	Nitella	No aquatic vegetation	Yellow pond lily	White water lify	Large-leaf pondweed	Curly-leaf pondweed	Leafy pondweed	variable portoweed	Illinois pondweed	American pondweed	Sago pordweed	White-stemmed pongweed	omali pondweed	Richardson's pondweed	Flat-stemmed poridweed	Common bladderwort	Wild celery, eel grass	Watermeal	Horned pondweed	Water stargrass		34																																															
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Species Codes RIBE Rur marionid	Coontail	Chara		Broadleaf watermilfoil			П	- 1		American lotus	Nitella	3 No aquatic vegetation	Yellow bond lily	white water IIIy	Carge-real portumeed	Cully real pullument	Variable condweed	Illinois pondweed	American pondweed	Sago pondweed	White-stemmed pondweed	т	т	т	т	Wild celety, eet grass	т	т	water stargrass	***	45																																									
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Date Latitude Longitude	3158 -85	3149 -85	3085 -85	2979 -85	2998 -85	3309 -85	3092 -85	3153 -85	30.00 acor	3079 -85	3161 -85	3041 -85	2972 -85	2947 -85	2 0007	20- 5197	20.00	7774 -85	3857 -85	2727 -85	2645 -85	5667 -85	2602 -B	2517 -85	5004	2484 -62	2403 -82	5329 -82	2337 -85	2317 -85	2273 -85	2213 -65	200 - 0077	29- 7617	100	2012	30 0000	2007	1179 95	1110 -0114	0 100	1001	98. 1020	28. 880	000	8/2/05 41.32084 -85.6852	2077 -85	166 -85	147 -85	1901	3208 -85	2136 -85	8/2/05 41.32192 -85.6795 8/2/05 41.32192 -85.6791	973 .85	309 -85	335 -8	317 -85	253 -8	2243 -8	2196 -85	181 -85	9146 -8	3211 -85	952 -85	3072 -85	9021 -85	935 -85	1907 -85	883 -85	843 -85	8/2/05 41.31772 -85.6715	
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Date	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	2/0	8/2	8/2	8/2	8/2	8/2	2/8	2/8	0/0	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	2/0	2/0	2/0	0/0	2/0	0/0	0/0	8/2	0/0	2/0	2/0	2/0	2/0	8/2/8	8/2	8/2	8/2	8/2	8/2	8/2	2/8	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	8/2	
Lake	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Wednes	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Wedster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Wedster	Wedster	Wednes	Wedser	Webster	wednes	Wedge	Wedster	Webser	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webser	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	Webster	-



Backwater Lake

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	SpeNum	NatSpeNum	Species Coo	es
Backwater	4/15/05	41.31612	-85.67096	323	5.0	NP				0		BIBE	Bur marigold
Backwater	4/15/05	41.31573	-85.67009	324	3.0	NP				0	0	CEDE4	Coontail
Backwater	4/15/05	41.31622	-85.66874	325	5.0	1		1		1	0	CH?AR	Chara
Backwater	4/15/05	41.31666	-85.66793	326	4.0	1		1	1	2	1	ELCA7	Elodea
Backwater	4/15/05	41.31701	-85.66679	327	3.0	2			2	1	1	LEMN	Duckweeds
Backwater	4/15/05	41.31791	-85.66584	328	3.0	1			1	1	1	MYHE	Broadleaf watermilfoil
Backwater	4/15/05	41.31818	-85.6645	329	2.0	NP				0	0	MYSI	Northern watermilfoil
Backwater	4/15/05	41.31846	-85.66342	330	3.0	1			1	1	1	MYSP2	Eurasian watermilfoil
Backwater	4/15/05	41.31785	-85.66315	331	3.0	1			1	1	1	MYVE	Whorled watermilfoil
Backwater	4/15/05	41.31736	-85.66423	332	4.0	2		1	2	2	1	NAFL	Slender naiad
Backwater	4/15/05	41.31692	-85.66536	333	3.0	1			1	1	1	NAGU	Southern waternymph
Backwater	4/15/05	41.31627	-85.66676	334	4.0	1			1	1	1	NAMA	Spiny naiad
Backwater	4/15/05	41.31608	-85.66765	335	5.0	1		1		1	0	NAMI	Brittle waternymph
Backwater	4/15/05	41.31549	-85.66844	336	5.0	1		1		1	0	NELU	American lotus
Backwater	4/15/05	41.31474	-85.66881	337	3.0	NP				0	0	NI?TE	Nitella
Backwater	4/15/05	41.31523	-85.66734	338	5.0	NP				0	0	NOAQVG	No aquatic vegetation
Backwater	4/15/05	41.31555	-85.66614	339	5.0	1	1			1	0	NULU	Yellow pond lily
Backwater	4/15/05	41.31606	-85.66475	340	3.0	1	1	3,000	794-1-6	1	0	NYTU	White water lily
Backwater	4/15/05	41.31648	-85.66374	341	2.0	1			1	1	1	POAM	Large-leaf pondweed
Backwater	4/15/05	41.31542	-85.66486	342	3.0	- 1	1			1	0	POCR3	Curly-leaf pondweed
Backwater	4/15/05	41.31474	-85.66553	343	3.0	1			1	1	1	POFO3	Leafy pondweed
Backwater	4/15/05	41.31411	-85.66659	344	4.0	NP				0	0	POGR8	Variable pondweed
Backwater	4/15/05	41.31392	-85.66771	345	2.0	NP				0	0	POIL	Illinois pondweed
Backwater	4/15/05	41.31357	-85.66676	346	2.0	1			1	1	1	PONO2	American pondweed
Backwater	4/15/05	41.31415	-85.66575	347	4.0	1		1	1	2	1	POPE6	Sago pondweed
Backwater	4/15/05	41.3148	-85.66455	348	3.0	1	1	1		2	0	POPR5	White-stemmed pondweed
Backwater	4/15/05	41.31549	-85.66365	349	3.0	1	1	1	1	3	1	POPU7	Small pondweed
Backwater	4/15/05	41.31547	-85.66263	350	2.0	3			3	1	1	PORI2	Richardson's pondweed
Backwater	4/15/05	41.31475	-85.66301	351	3.0	3	3	1		2	0	POZO	Flat-stemmed pondweed
Backwater	4/15/05	41.31417	-85.66383	352	2.0	2	2		1	2	1	UTMA	Common bladderwort
Backwater	4/15/05	41.31364	-85.66438	353	3.0	- 1		1		1	0	VAAM3	Wild celery, eel grass
Backwater	4/15/05	41.31336	-85.66531	354	2.0	- 1			1	1	1	WO?LF	Watermeal
Backwater	4/15/05	41.31362	-85.66338	355	3.0	3			1	1	1	ZAPA	Horned pondweed
Backwater	4/15/05	41.31382	-85.66225	356	3.0	5	5		1	2	1	ZODU	Water stargrass
Backwater	4/15/05	41.3144	-85.66126	357	2.0	5	1	1	5	3	1		
Backwater	4/15/05	41.31374	-85.66066	358	2.0	4	1		4	2		Count	34
Backwater	4/15/05	41.31301	-85.66107	359	3.0	2	1		2				
Backwater	4/15/05	41.31216	-85.66097	360	3.0	3			3	1	1		
Backwater	4/15/05	41.31128	-85.6607	361	2.0	2	1		2	2	1		
Backwater	4/15/05	41.31019		362	3.0	5			5	1	1		
Backwater	4/15/05	41.30891	-85.66002	363	4.0	5			5	1	1		
Backwater	4/15/05		-85.65996	364	2.0	5			5				

Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	ZODU	SpeNum	NatSpeNum	Species Cod	des
Backwater	5/25/05	41.31612		323	5.0	1					0	0	BIBE	Bur marigold
Backwater	5/25/05	41.31573	-85.67009	324	3.0	5		5	- 1		2	1	CEDE4	Coontail
Backwater	5/25/05	41.31622	-85.66874	325	6.0	- 1			1		1	1	CH?AR	Chara
Backwater	5/25/05	41.31666	-85.66793	326	5.0	1			1		1	1	ELCA7	Elodea
Backwater	5/25/05	41.31701	-85.66679	327	3.0	1	1		1		2	1	LEMN	Duckweeds
Backwater	5/25/05	41.31791	-85.66584	328	3.0	1			1		1	1	MYHE	Broadleaf watermilfoil
Backwater	5/25/05	41.31818	-85.6645	329	2.0	- 1			1		1	1	MYSI	Northern watermilfoil
Backwater	5/25/05	41.31846	-85.66342	330	4.0	1			1		1	1	MYSP2	Eurasian watermilfoil
Backwater	5/25/05	41.31785	-85.66315	331	2.0	1			1		1	1	MYVE	Whorled watermilfoil
Backwater	5/25/05	41.31736	-85.66423	332	6.0	1			1		1	1	NAFL	Slender naiad
Backwater	5/25/05	41.31692	-85.66536	333	4.0	1	1		1		2	1	NAGU	Southern waternymph
Backwater	5/25/05	41.31627	-85.66676	334	5.0	0					0	0	NAMA	Spiny naiad
Backwater	5/25/05	41.31608	-85.66765	335	6.0	1		0	1		1	1	NAMI	Brittle waternymph
Backwater	5/25/05	41.31549	-85.66844	336	6.0	1		1	1		2	1	NELU	American lotus
Backwater	5/25/05	41.31474	-85.66881	337	6.0	1	1	1	- 1		2	1	NI?TE	Nitella
Backwater	5/25/05	41.31523	-85.66734	338	6.0	0					0	0	NOAQVG	No aquatic vegetation
Backwater	5/25/05	41.31555	-85.66614	339	6.0	1		1			1	0	NULU	Yellow pond lily
Backwater	5/25/05	41.31606	-85.66475	340	5.0	1	1				1 2	1	NYTU	White water lily
Backwater	5/25/05	41.31648	-85.66374	341	3.0	5			5		1	1	POAM	Large-leaf pondweed
Backwater	5/25/05	41.31542	-85.66486	342	4.0	1	1	1			2	0	POCR3	Curly-leaf pondweed
Backwater	5/25/05	41.31474	-85.66553	343	5.0	2	1	2	2		3	1	POFO3	Leafy pondweed
Backwater	5/25/05	41.31411	-85.66659	344	5.0	1		1			1	0	POGR8	Variable pondweed
Backwater	5/25/05	41.31392	-85.66771	345	3.0	0					0	0	POIL	Illinois pondweed
Backwater	5/25/05	41.31357	-85.66676	346	3.0	1			- 1		1	1	PONO2	American pondweed
Backwater	5/25/05	41.31415	-85.66575	347	3.0	5		3	1		2	1	POPE6	Sago pondweed
Backwater	5/25/05	41.3148	-85.66455	348	3.0	2		1	- 1		2	1	POPR5	White-stemmed pondweed
Backwater	5/25/05	41.31549	-85.66365	349	3.0	5	5	2	1		3	1	POPU7	Small pondweed
Backwater	5/25/05	41.31547	-85.66263	350	3.0	2	2		- 1		2	1	PORI2	Richardson's pondweed
Backwater	5/25/05	41.31475	-85.66301	351	5.0	5	5	1	1		3	1	POZO	Flat-stemmed pondweed
Backwater	5/25/05	41.31417	-85.66383	352	3.0	4	3	1	200		2	0	UTMA	Common bladderwort
Backwater	5/25/05	41.31364	-85.66438	353	3.0	1		1	- 1		2	1	VAAM3	Wild celery, eel grass
Backwater	5/25/05	41.31336	-85.66531	354	5.0	3			3		1	1	WO?LF	Watermeal
Backwater	5/25/05	41.31362	-85.66338	355	4.0	1			1		1	1	ZAPA	Horned pondweed
Backwater	5/25/05	41.31382	-85.66225	356	3.0	5	5		2		2	1	ZODU	Water stargrass
Backwater	5/25/05	41.3144	-85.66126	357	3.0	5	5	1			2	0		*
Backwater	5/25/05	41.31374	-85.66066	358	3.0	5	5	2	2		3		Count	34
Backwater	5/25/05	41.31301	-85.66107	359	2.0	5	5	2	1		3	1		
Backwater	5/25/05	41.31216	-85.66097	360	2.0	1		1	1		2	1		
Backwater	5/25/05	41.31128	-85.6607	361	3.0	1			1		1	1		
Backwater	5/25/05	41.31019	-85.6606	362	5.0	5			5		1	1		
Backwater	5/25/05	41.30891	-85.66002	363	4.0	5			5		1	1		
Backwater	5/25/05	41.30761	-85.65996	364	3.0	5			5		1	1		



Lake	Date	Latitude	Longitude	Site	Depth	RAKE	MYSP2	POCR3	CEDE4	NAFL	POPE6	SpeNum	NatSpeNum	Species Cod	des
Backwater Lake	8/2/05	41.31612		323	5.0	1	711-27-2		1	1		2	2	BIBE	Bur marigold
Backwater Lake	8/2/05	41.31573		324	5.0	1			1			1	1	CEDE4	Coontail
Backwater Lake		41.31622		325	5.0	4	2		2			2	1	CH?AR	Chara
Backwater Lake	8/2/05	41.31666		326	4.0	5			5			1	1	ELCA7	Elodea
Backwater Lake	8/2/05	41.31701	-85.6668	327	3.0	5			5			1	1	LEMN	Duckweeds
Backwater Lake	8/2/05	41.31791	-85.6658	328	4.0	2			2			1	1	MYHE	Broadleaf watermilfoil
Backwater Lake	8/2/05	41.31818		329	3.0	1			1			1	1	MYSI	Northern watermilfoil
Backwater Lake		41.31846		330	3.0	1			1			-1	1	MYSP2	Eurasian watermilfoil
Backwater Lake		41.31785		331	2.0	2			2			1	1	MYVE	Whorled watermilfoil
Backwater Lake		41.31736		332	4.0	1			1			1	1	NAFL	Slender naiad
Backwater Lake	8/2/05	41.31692		333	4.0	3			3		1	2	2	NAGU	Southern waternymph
Backwater Lake		41.31627	-85.6668	334	5.0	5			4		1	2	2	NAMA	Spiny naiad
Backwater Lake	8/2/05	41.31608	-85.6676	335	6.0	2	1		2			2	1	NAMI	Brittle waternymph
Backwater Lake		41.31549	-85.6684	336	6.0	1			1			1	1	NELU	American lotus
Backwater Lake		41.31474	-85.6688	337	4.0	1			1			- 1	1	NI?TE	Nitella
Backwater Lake		41.31523	-85.6673	338	6.0	1			1			1	1		No aquatic vegetation
Backwater Lake	8/2/05	41.31555	-85.6661	339	5.0	5	1	1	2		3	4	2	NULU	Yellow pond lily
Backwater Lake	8/2/05	41.31606	-85.6647	340	4.0	5	1		5			2	1	NYTU	White water lily
Backwater Lake	8/2/05	41.31648	-85.6637	341	3.0	5			5			1	1	POAM	Large-leaf pondweed
Backwater Lake		41.31542	-85.6649	342	4.0	5	2	1	3			3	1	POCR3	Curly-leaf pondweed
Backwater Lake	8/2/05	41.31474	-85.6655	343	4.0	4	2		2			2	1	POFO3	Leafy pondweed
Backwater Lake	8/2/05	41.31411	-85.6666	344	5.0	4			4		7	1	1	POGR8	Variable pondweed
Backwater Lake	8/2/05	41.31392	-85.6677	345	4.0	1			1			- 1	1	POIL	Illinois pondweed
Backwater Lake		41.31357	-85.6668	346	4.0	4			4			1	1	PONO2	American pondweed
Backwater Lake	8/2/05	41.31415	-85.6657	347	4.0	3	1	1	3			3	1	POPE6	Sago pondweed
Backwater Lake	8/2/05	41.3148		348	3.0	5		1	5			2	1	POPR5	White-stemmed pondweed
Backwater Lake	8/2/05	41.31549	-85.6637	349	4.0	5	2		5	1 = 1 = 1		2	1	POPU7	Small pondweed
Backwater Lake	8/2/05	41.31547	-85.6626	350	2.0	3	1		2			2	1	PORI2	Richardson's pondweed
Backwater Lake	8/2/05	41.31475	-85.663	351	4.0	5	3		5			2	1	POZO	Flat-stemmed pondweed
Backwater Lake		41.31417	-85.6638	352	3.0	2			2			1	1	UTMA	Common bladderwort
Backwater Lake	8/2/05	41.31364	-85.6644	353	4.0	4			4			1	1	VAAM3	Wild celery, eel grass
Backwater Lake		41.31336	-85.6653	354	3.0	5	1		5			2	1	WO?LF	Watermeal
Backwater Lake		41.31362	-85.6634	355	5.0	5			5			1	1	ZAPA	Horned pondweed
Backwater Lake	8/2/05	41.31382	-85.6623	356	4.0	5			5			1	1	ZODU	Water stargrass
Backwater Lake	8/2/05	41.3144	-85.6613	357	3.0	5	5					1	0		Trains stargetion
Backwater Lake	8/2/05	41.31374	-85.6607	358	2.0	5			5			1	1	Count	34
Backwater Lake		41.31301	-85.6611	359	3.0	5	3		5			2	1		
Backwater Lake	8/2/05	41.31216	-85.661	360	3.0	5	1		5			3	2		
Backwater Lake		41.31128	-85.6607	361	3.0	5			5			2	2		
Backwater Lake	8/2/05	41.31019	-85.6606	362	4.0	4			4			1	1		
Backwater Lake	8/2/05	41.30891	-85.66	363	4.0	5			5			1	1		
Backwater Lake	8/2/05	41.30761	-85.66	364	4.0	2			2			1	1		



2006 Vegetation Control Permits Webster Lake

APPLICATION FOR AQUATIC VEGETATION CONTROL PERMIT State Form 26727 (R / 11-03) Approved State Board of Accounts 1987 Whole Lake Check type of permit INSTRUCTIONS: Please print or type information	FOR OFFICE USE ONL License No. Date Issued Lake County	Return to: Page 1 of 6 Y DEPARTMENT OF NATURAL RESOURCES Division of Fish and Wildlife Commercial License Clerk 402 West Washington Street, Room W273 Indianapolis, IN 46204 FEE: \$5.00
Applicant's Name	Lake Assoc. Name	
Webster Lake Conservation Association	Webs	ter Lake Conservation Association
Rural Route or Street 85 EMS W19		Phone Number 574-372-7291
City and State		ZIP Code
North Webster, IN Certified Applicator (if applicable)		46555
Certified Applicator (II applicable)	Company or Inc. Name	Certification Number
Rural Route or Street		Phone Number
City and State		ZIP Code
Lake (One application per lake)	Nearest Town	County
Webster Lake	North Webst	
Does water flow into a water supply		Yes X No
Please complete one section for EACH treatment area. Atta	ch lake map showing treatme	ent area and denote location of any water supply intake.
Treatment Area # 1 LAT/LONG or UTM	M's Center of bed @ N4	1.32367 W85.67219
Total acres to be controlled 2.5 Proposed shoreline treatmen	t length (ft) 2300	Perpendicular distance from shoreline (ft) 50
Maximum Depth of 8		
Treatment (ft) Expected date(s) of treatmen Treatment method: X Chemical Physical	Biological Control	ange due to weather or plant growth) Mechanical
Based on treatment method, describe chemical used, method of p		
	r (specify) Survey Dat	a From May, 2005 Tier II
	Check if Target	-
Aquatic Plant Name	Species	Relative Abundance % of Community
Coontail	X	20
Curlyleaf pondweed	x	20
Eurasian watermilfoil	x	20
Chara	x	5
Flatstem Pondweed	x	10
Naiad	X	20
Largeleaf pondweed		3
Water Stargrass		2
· · · · · · · · · · · · · · · · · · ·		-
		* .



					Page _	2 of 6	
Treatment Area # 2		LAT/LON	IG or UTM's Ce	enter of Bed at N	41.32786 W85.67519		
Total acres to be controlled 4.6	Propos	ed shoreline	treatment length	(ft) 4000	Perpendicular distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft) 8	Expecte	ed date(s) of	treatment(s)	13-Jun			
Treatment method: X Chem		Physical		Biological Control	Mechanical		
			ethod of physical	or mechanical control	and disposal area, or the species and stocking		
	d and Na	,			. 5 . M		
Plant survey method: X Rake		Visual	Other (specif	Survey Da Check if Target	ata From May, 2005 Tier II		
Aquatic	Plant N	ame		Species	Relative Abundance % of Community		
C	ontail			х	20		
Curlylea	f pondv	veed		х	20		
Eurasiar	waterr	nilfoil		x	20		
Largelea	af pond	weed			5		
Flatster	pondy	veed		x	5	ann an an an an an an an an an an an an	
1	Vaiad			x	20		
(Chara				5		
Water	Stargra	ass			5		
Treatment Area # 3		LAT/LON	NG or UTM's C	enter of Bed @ N	41.32842 W85.68379		
Total acres to be controlled 1.4	Propos	ed shoreline	treatment length	(ft) 1204	Perpendicular distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft) 8	Expect	ed date(s) of	f treatment(s)	1-Jun			
Treatment method: X Chem		Physical		Biological Control	Mechanical		
Based on treatment method, desc	ibe chem	ical used, m	ethod of physical	or mechanical control	and disposal area, or the species and stocking		
rate for biological control. Rewa	rd & Naut	ique					
Plant survey method: X Rake	х	Visual	Other (specif	(y) Survey Da	ata From May, 2005 Tier II		
Aquatic	Plant N	ame		Check if Target Species	Relative Abundance % of Community		
C	oontail			×	20		
Eurasia	waterr	nilfoil		×	10		
Small	pondwe	eed		×	10		
Flatster	n pondv	veed		×	10		
Comi	non nai	ad		×	5	12360	
Du	ckweed			×	5		
Wa	termea			×	3		
Water	Stargra	ass			2		



								Page _	3 of 6	
Treatment Area #		LAT/LON	NG or UTM's	Сє	enter of Bed at N4	41.33	127 W85.68379			
Total acres to be controlled	3.25	Propose	ed shoreline	treatment leng	gth ((ft) 2854	Perpe	endicular distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft)	8			f treatment(s)		13-Jun		,		
Treatment method:										
Based on treatment me	Based on treatment method, describe chemical used, method of physical or mechanical control and disposal area, or the species and stocking									
rate for biological contr	rol. Reward	d and Na	utique							
Plant survey method:	X Rake	х	Visual	Other (sp	ecif	y) Survey Da	ata Fr	om May, 2005 Tier II		
Aquatic Plant Name						Check if Target Species		Relative Abundance % of Community		
	pondw	reed			×		30			
	N	aiad				×		20		
	Co	ontail				x		15		
	Flatstem	pondw	reed			×		10		
Eurasian watermilfoil						×		10		
	Duc	kweed				×		5		
Watermeal						×		5		
	Horned	Pondw	eed					5		
Treatment Area #	5		LAT/LON	NG or UTM's	Ce	enter of Bed @ N	141.32	2565 W85.69400		
Total acres to be controlled	12.15	Propose	ed shoreline	treatment len	gth ((ft) 10600	Perpe	endicular distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft)	8	Expecte	ed date(s) of	f treatment(s)		13-Jun				
Treatment method:	X Chemic	al	Physical			Biological Control	Biological Control Mechanical			
Based on treatment m	ethod, descrit	oe chemi	cal used, m	ethod of physi	cal c	or mechanical control	and di	sposal area, or the species and stocking		
rate for biological cont	rol. Reward	d & Nauti	que							
Plant survey method:	X Rake	х	Visual	Other (sp	ecif	y) Survey Da	ata Fr	om May, 2005 Tier II		
	Aquatic F	Plant N	ame			Check if Target Species		Relative Abundance % of Community		
	Curlyleaf	pondw	/eed			×		40		
	Co	ontail				×		15		
	Eurasian	watern	nilfoil			×		10		
	Small p	ondwe	ed			×		5		
	Horned	pondw	eed			×		5		
	CI	hara				×		10		
	Flatstem	pondw	reed			×		5		
	Spati	terdock	:					5		
	White	water I	ily					5		



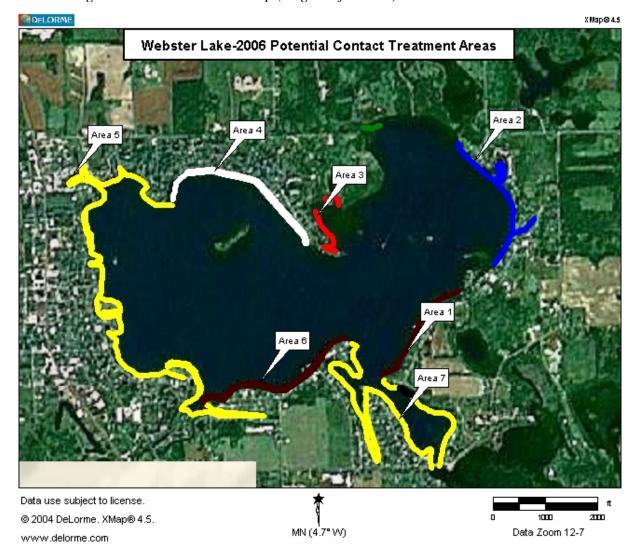
								Page	4 of _6	
Treatment Area #	6		LAT/LON	NG or UTM's	Ce	enter of Bed at N	41.32041 V	W85.68114		
Total acres to be controlled	3.07	Propos	ed shoreline	treatment leng	gth ((ft) 2679	Perpendicul	ar distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft)	8	Expecte	cted date(s) of treatment(s) 13-Jun							
Treatment method:	X Chemic		Physical			Biological Control	Med	chanical		
				ethod of physic	al o	r mechanical control	and disposal	I area, or the species and stocking		
rate for biological contr		d and Na		—	_			·		
Plant survey method:	X Rake	_=	Visual	Other (spe	ecify			May, 2005 Tier II		
	Aquatic F	Plant Na	ame			Check if Target Species		Relative Abundance % of Community		
Curlyleaf pondweed						х		45		
Coontail						х		20		
	Flatstem	pondv	veed			х		15		
	N	aiad				х		10		
	Largeleat	f pondv	weed					5		
	Eurasian	watern	nilfoil			х		5		
					-					
Treatment Area #	7		LAT/LON	NG or UTM's	Се	enter of Bed @ N	41.31094 \	W85.67394		
Total acres to be controlled	11.25	Propos		treatment leng				ar distance from shoreline (ft)	50	
Maximum Depth of Treatment (ft)	8			f treatment(s)		13-Jun		, ,		
Treatment method:	X Chemic		Physical			Biological Control	Med	chanical		
Based on treatment me	ethod, descril	oe chemi	ical used, m	ethod of physic	cal o	or mechanical control	and disposal	area, or the species and stocking		
rate for biological conti		d & Nauti								
Plant survey method:	X Rake	х	Visual	Other (spe	ecify) Survey Da	ata From M	May, 2005 Tier II		
-	Aquatic F	Plant N				Check if Target		Relative Abundance		
					\dashv	Species		% of Community		
		ontail			\dashv	×		20		
	Eurasian	watern	nilfoil		\dashv	X		15		
	Spatt	terdock	(_			15		
	Curlyleaf	pondv	veed		_	х		10		
	Duc	kweed				х		5		
	Wate	ermeal				x		5		
	Flatstem	pondw	veed			, x		3		
	Sago p	ondwe	ed			x		2		
	Largeleaf	f pondv	veed					5		
Naiad						×		20		



						Page	5	of _6	
Treatment Area #	8		LAT/LONG or UTM's Ti	reat EWM and Cl	P wher it occur	rs (determine following	surve	ey)	
Total acres to be controlled		Propose	ed shoreline treatment length			tance from shoreline (ft)			
Maximum Depth of Treatment (ft)			ed date(s) of treatment(s)	Curlyleaf April 19 an					
Treatment method:	X Chemic		Physical	Biological Control	Mechanic	201			
rate for biological contro			ical used, method of physical early curlyleaf & Renovate or a				3		
Plant survey method:	X Rake	X	Visual Other (specif	fy) Overall Ti	er II Data From	April 2005			
	Aquatic P	lant Na	ame	Check if Target Species		Relative Abundance % of Community			
	Curlyleaf	Pondw	reed	X		40			
	Eurasian V	Natern	nilfoil	×	35				
	Cor	ontail				15			
	Ch	hara				5			
	Na	aiad				3			
	Elc	odea				1			
	Flatstem	Pondw	/eed			1			
INSTRUCTIONS: WI			lls in "Applicant's Signature" unles lake treatment, they should sign			ional company			
Applicant Signature						Date			
Certified Applicant's Sign	inature					Date			
						Date			
			FOR	OFFICE ONLY Fisheries Staff Speci	ialist				
	Approved		Disapproved						
	Approved		Disapproved	Environmental Staff	Specialist				
Mail check or money order in the amount of \$5.00 to: DEPARTMENT OF NATURAL RESOURCES DIVISION OF FISH AND WILDLIFE COMMERCIAL LICENSE CLERK 402 WEST WASHINGTON STREET ROOM W273 INDIANAPOLIS, IN 46204									



Webster Lake Vegetation Control Permit Map (Page 6 of Permit)





Backwater Lake

	VEGETATION State Form 26727 Approved State Bo Whole Lake	I FOR AQUATIC CONTROL PERMIT (R / 11-03) ard of Accounts 1987 Multiple Treatment Areas Check type of permit	FOR OFFICE USE ON License No. Date Issued Lake County	LY	Return to: Page DEPARTMENT OF NATURAL RE Division of Fish and Wild Commercial License Cle 402 West Washington Street, Ro Indianapolis, IN 46204			
INSTRUCTION	S: Please print or ty		Lake County		FEE: \$5.00			
Applicant's Nan	ne		Lake Assoc. Name					
	Aquatic C	onrol Inc.	Milfoil treatment for Webster	Lake Conservati	ion Ass./Contact treatment	for Backwater Lake Association		
Rural Route or	Street	418 W. State Rd. 258			Phone Number 812-	497-2410		
City and State		0			ZIP Code			
Certified Applic	ator (if applicable)	Seymour, IN	Company or Inc. Name		Certification Number	17274		
	Nathan Long/	David Isaacs	Aquatic Con	trol		05/15824		
Rural Route or		David loadoo	7 iqualio con	1101	Phone Number	33/13024		
		418 W. State Rd. 258			812-	497-2410		
City and State		Seymour, IN			ZIP Code 47274			
Lake (One appl	ication per lake)		Nearest Town		County			
	Backwat	ter Lake	North Webs	ter		sciusko		
Does water flow	v into a water supply				X Yes	No		
Please comp	lete one section for	EACH treatment area. Attach l	ake map showing treatm	ent area and	I denote location of a	ny water supply intake.		
Treatment Area	# 1	LAT/LONG or UTM's	Whole lake search	and alimin	ata Europian wata	rmilfoil		
Total acres to b controlled	e 204	Proposed shoreline treatment len			ar distance from shore			
Maximum Dept Treatment (f		Expected date(s) of treatment(s)	1-Jun					
Treatment meth			Biological Control	Mec	Mechanical			
Based on treatm	nent method, describ	pe chemical used, method of physi	ical or mechanical control	and disposal	area, or the species a	nd stocking		
rate for biologic	al control. Treat	Eurasian watermilfoil with F	Renovate herbicide w	here it app	ears			
Plant survey me	ethod: X Rake	X Visual Other (sp	pecify)					
	Aquatic F	Plant Name	Check if Target Species		Relative Abundance % of Community			
	Co	ontail			50			
	Curlyleaf	Pondweed			10			
		watermilfoil	Х		10			
	Spatt	terdock			10			
		waterlilly			10			
	Nitel	la spp.			10			



							Page _	2 of	_4	
Treatment Area #	2		LAT/LONG	or UTM's	Се	nter of bed at N4	1.31430 W85.66890			
Total acres to be controlled	4	Propose	ed shoreline tr	eatment len	igth (f	t) 2050	Perpendicular distance from shoreline (ft)	75		
Maximum Depth of Treatment (ft)	5	Expecte	ed date(s) of tr	eatment(s)		1-Jun				
Treatment method:	X Chemic	cal _	Physical			Biological Control	Mechanical			
Based on treatment m	ethod, descri	oe chemi	cal used, met	hod of physi	ical o	r mechanical control	and disposal area, or the species and stocking			
rate for biological cont	rol. Rewa	rd and	nautique w	vill be used	d to	control vegetatio	on near docks and in boat lanes			
Plant survey method:	X Rake		Visual	Other (sp						
Aquatic Plant Name						Check if Target Species	Relative Abundance % of Community			
	Co	ontail				X	50			
Eurasian watermilfoil						X	10			
Curlyleaf pondweed						X	10			
	Duc	kweed				х	10			
	Wat	ermeal				×	10			
	Spat	terdock	(10			
Treatment Area #	3		LAT/LONG	a or UTM's	Ce	nter of bed at N4	11.3186 W85.66890			
Total acres to be controlled	2	Propos	ed shoreline tr	reatment len	ngth (f	t) 1068	Perpendicular distance from shoreline (ft)	75		
Maximum Depth of Treatment (ft)	5	Expecte	ed date(s) of t	reatment(s)		1-Jun				
Treatment method:	X Chemi		Physical			Biological Control	Mechanical			
Based on treatment m	ethod, descri	be chemi	ical used, met	hod of physi	ical o	r mechanical control	and disposal area, or the species and stocking			
rate for biological cont	rol. Rewa	rd and	Nautique v	vill be use	d to	control vegetation	on in boating lane and around docks			
Plant survey method:	X Rake		Visual	Other (sp						
	Aquatic I	Plant N	ame			Check if Target Species	Relative Abundance % of Community			
	Co	ontail				X	40			
	Eurasian	watern	nilfoil			x	10			
	Curlyleat	pondv	veed			X	20			
	Spat	terdock	(10			
	Duc	kweed				X	10			
	Wat	ermeal				x	10			



							Pag	је _	3 (of _	4
Treatment Area #	4		LAT/LONG	GorUTM's (Center of bed at N	41.31757 W85.	66218				
Total acres to be controlled	1	Propose	ed shoreline t	reatment lengt	th (ft) 570	Perpendicular dis	tance from shoreline (ft)		50-	-75	_
Maximum Depth of Treatment (ft)	4		ed date(s) of ti		1-Jun		(1)		-		_
Treatment method:	X Chemic		Physical		Biological Control	Mechanic	eal				-
Based on treatment r	method describ	no chomi		thad of physics			or the species and stock				-
				illou of priysica	ai of mechanical control	and disposal area,	or the species and stock	ing			
rate for biological cor Plant survey method:			Nautique	70, (_	=
Plant survey method:			Visual	Other (spec	Check if Target	1				_	=
	Aquatic F	Plant IN	ame		Species		Relative Abundance % of Community	1			
	Co	ontail			x		40				
	Curlyleaf	pondw	eed		x		20				
	Eurasian	Watern	nilfoil		x		10				
	Spatt	erdock					15				
	Duc	kweed			x		5				
	Wate	ermeal			x		5				
	White	pond li	ly				5				
											_
											_
INSTRUCTIONS:	Whoever treats	the lake fil	ls in "Applicant"	's Signature" unl	less they are a professiona n on the "Certified Applica	I. If they are a profess	ional company				_
Applicant Signature	wild spe	Cianzes in	iake treatment,	urey snould sign	n on the Certified Applical	it line.	Date				_
Certified Applicant's S	Signatura										
Certified Applicants	signature						Date				
											_
				FOR	R OFFICE ONLY Fisheries Staff Spec	inlint					_
	Approved		Disapp	roved	Fisheries Stall Spec	idiist					
	Approved		Disapp	roved	Environmental Staff	Specialist					
Mail check or money	order in the am	ount of \$	DEPA DIVISIO COMM 402 WE	ON OF FISH A IERCIAL LICE!	GTON STREET ROOM						



Backwater Lake Vegetation Control Permit Map (Page 4 of Permit)

